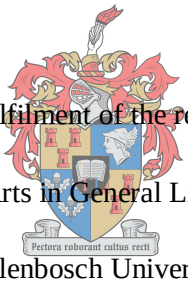
A NOMINAL SHELL ANALYSIS OF RESTRICTIVE RELATIVE CLAUSE CONSTRUCTIONS IN TRIPOLIAN LIBYAN ARABIC

by

Siham Musstfa Alshabani



Thesis presented in partial fulfilment of the requirements for the degree of

Master of Arts in General Linguistics at

Stellenbosch University

Supervisor: Dr. Johan Oosthuizen

Faculty of Arts and Social Sciences

Department of General Linguistics

December 2018

Declaration

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own original work, that I am the authorship owner thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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December 2018

Abstract

This study deals with the phenomenon of restrictive relative clause constructions in Tripolian Libyan Arabic (TL-Arabic), a variety of Maghrebi Arabic spoken in and around Tripoli, the capital of Libya. The study has two main objectives. Firstly, the empirical objective is to give a detailed description of the facts of relative pronouns and relative clause constructions in TL-Arabic, which has not previously been attempted in the literature. As will be shown, TL-Arabic has only one element functioning as a relative pronoun, namely *elly*. Depending on the grammatical context, this pronoun corresponds to a range of relative pronouns in English, such as "who", "which", "whose", "where", "when", etc. The focus of the investigation is on the morphophonological properties of the relative pronoun, the structural positions in which it can occur, as well as on the grammatical functions of the matrix clause expression containing the relative clause (e.g. subject, direct object, etc.). Although the emphasis is on restrictive relative clauses, attention is also given to two other types of relative clause that occur in TL-Arabic, namely non-restrictive relative clauses (also known as appositive relative clauses) and free relative clauses. The second main objective is to provide an analysis of restrictive relative clause constructions in TL-Arabic within the broad theoretical framework of generative grammar. More specifically, an attempt is made to develop a minimalist generative account of the TL-Arabic facts within the framework of the analysis of restrictive relative clauses in Afrikaans put forward by Meyer (2015). The core hypotheses of Meyer's analysis are based largely on the ideas underlying Oosthuizen's (2013) Nominal Shell Analysis of obligatory reflexivity. In developing the TL-Arabic analysis, the focus falls on two main questions: (i) what are the specific steps in the derivation of restrictive relative clauses in TL-Arabic? and (ii) precisely how and by means of which mechanisms is the coreferential relationship between the relative pronoun and its antecedent established? In broad terms, it is argued that the relative pronoun *elly* and the expression that will eventually serve as its antecedent are initially merged into the same nominal shell construction, more specifically an *n*P with a contrastive-focus light noun *n* as its head. The light noun takes the relative pronoun as its complement and the antecedent expression as its specifier. Unlike the light noun and the relative pronoun, the antecedent has a set of valued phi (φ)-features (person, number, gender), which serves to value the φ-features of the relative pronoun with the light noun serving as intermediary. In this configuration the φ-valued relative pronoun is then semantically interpreted as obligatory coreferential with the expression in the specifier position of the *n*P. Several operations are subsequently applied to raise the relative pronoun and its antecedent into their respective surface positions. Employing the Split-CP hypothesis of Rizzi (1997) and Benincà and Poletto (2004), and in line with the analysis proposed for Afrikaans by Meyer (2015), it is argued that the relative pronoun ends up in the specifier position of a Contrastive Focus phrase in the left-periphery of the relative clause. In the course of the discussion attention is also given to two instances of obligatory agreement relationships in TL-Arabic, namely between (i) a subject marker (SM) and the subject argument of a sentence and (ii) an object marker (OM) and the direct object argument. Following

Elghariani (2016), it is argued that both these relationships can be accounted for in terms of essentially the same nominal shell analysis as proposed for relative pronouns and their antecedents, but with the nominal shell in these cases headed by an identity-focus light noun. The main finding of the study is that the proposed nominal shell analysis provides an adequate description and explanation of the facts of restrictive relative clauses in TL-Arabic, without requiring any theoretical devices not already available within the broad generative minimalist framework.

Opsomming

Hierdie studie handel oor die verskynsel van restriktiewe (of beperkende) relatiefsin-konstruksies in Tripoliaans-Libiese Arabies (TL-Arabies), ’n variëteit van Maghrebi Arabies wat gepraat word in en rondom Tripoli, die hoofstad van Libië. Die verskynsel is nog nie sistematies beskryf vir TL-Arabies nie. Die studie het twee hoofoogmerke. Die eerste, empiriese, oogmerk is om ’n gedetailleerde beskrywing te gee van die feite van relatiewe voornaamwoorde en relatiefsin-konstruksies in TL-Arabies. Soos getoon sal word, het TL-Arabies slegs een element wat as relatiewe voornaamwoord optree, naamlik *elly*. Afhangende van die grammatikale konteks, korrespondeer hierdie voornaamwoord met ’n reeks relatiewe voornaamwoorde in Engels, bv. “who”, “which”, “whose”, “where”, “when”, ens. Die ondersoek fokus op die morfofonologiese eienskappe van die relatiewe voornaamwoord, die strukturele posisies waarin dit kan voorkom, sowel as die grammatikale funksies van die matrikssin-uitdrukking wat die relatiefsin bevat (bv. subjek, direkte objek, ens.). Hoewel die klem geplaas word op restriktiewe relatiefsinne, word daar ook aandag gegee aan twee ander tipes relatiefsin in TL-Arabies, naamlik nie-restriktiewe relatiefsinne (ook bekend as apposisionele of bystellende relatief-sinne) en vrye relatiefsinne. Die tweede hoofoogmerk is om ’n analise te gee van restriktiewe relatiefsin-konstruksies in TL-Arabies binne die breë teoretiese raamwerk van generatiewe grammatika. Meer spesifiek word daar gepoog om ’n generatiewe minimalistiese beskrywing en verklaring te gee van die TL-Arabiese feite binne die raamwerk van Meyer (2015) se analise van restriktiewe relatiefsinne in Afrikaans. Die kernhipoteses van Meyer se analise is grootliks gebaseer op die idees onderliggend aan Oosthuizen (2013) se Nominale Skulp-analise (“Nominal Shell Analysis”) van verpligte refleksiwiteit. In die ontwikkeling van die TL-Arabiese analise val die fokus op twee hoofvrae: (i) wat is die spesifieke stappe in die afleiding van restriktiewe relatiefsinne in TL-Arabies? en (ii) presies hoe en deur middel van watter meganismes word die koreferensiële verhouding tussen die relatiewe voornaamwoord en sy antesedent bewerkstellig? In brëe trekke word daar geargumenteer dat die relatiewe voornaamwoord *elly* en die uitdrukking wat uiteindelik sal dien as sy antesedent aanvanklik saamgevoeg word in dieselfde nominale skulp-konstruksie, meer spesifiek ’n *n*P met ’n kontrasfokus-ligte naamwoord *n* as hoof. Die ligte naamwoord neem die relatiewe voornaamwoord as sy komplement en die antesedent uitdrukking as sy spesifiseerder. Anders as die ligte naamwoord en die relatiewe voornaamwoord, beskik die antesedent oor ’n stel gewaardeerde phi (φ)-kenmerke (persoon, getal, geslag), wat dien om die φ-kenmerke van die relatiewe voornaamwoord te waardeer met die ligte naamwoord wat optree as tussenganger. In dié konfigurasie word die φ-gewaardeerde relatiewe voornaamwoord dan semanties geïnterpreteer as verplig koreferensieel met die uitdrukking in die spesifiseerderposisie van die *n*P. Verskeie daaropvolgende bewerkings bring mee dat die relatiewe voornaamwoord en sy antesedent verskuif tot in hulle onderskeie oppervlakposisies. Teen die agtergrond van Rizzi (1997) en Benincà en Poletto (2004) se Verdeelde-CP-hipotese (“Split-CP hypothesis”), en in ooreenstemming met die analise wat deur Meyer (2015) voorgestel is vir Afrikaans, word geargumenteer dat die relatiewe

voornaamwoord opeindig in die spesifiseerderposisie van ’n Kontrastief-Fokus-frase aan die linkergrens van die relatiefsin. In die loop van die bespreking word daar ook aandag gegee aan twee instansies van verpligte kongruensie-verhoudings in TL-Arabies, naamlik tussen (i) ’n subjekmerker (SM) en die subjekargument van ’n sin en (ii) ’n objekmerker (OM) en die direkte objekargument. In navolging van Elghariani (2016) word geargumenteer dat beide dié verhoudings verklaar kan word in terme van wesenlik dieselfde nominale skulp-analise wat voorgestel word vir relatiewe voornaamwoorde en hulle antesedente; in hierdie gevalle besit die nominale skulp egter ’n identiteitsfokus-ligte naamwoord as hoof. Die hoofbevinding van die studie is dat die voorgestelde nominale skulp-analise ’n toereikende beskrywing en verklaring bied van die feite van restriktiewe relatiefsin-konstruksies in TL-Arabies, sonder die nodigheid vir enige teoretiese meganismes wat nie reeds beskikbaar is binne die breë generatiewe minimalistiese raamwerk nie.

Acknowledgements

Many people have contributed to the completion of this thesis. Without their support this thesis would have remained a dream. My deepest gratitude to all of them.

I would like to express my deep and sincere gratitude to my supervisor, Johan Oosthuizen, for his patience, kindness, and guidance during long hours of discussion. Without your support, none of this would have been possible!

I wish to express my thanks and my deepest gratitude to all my family members. More specifically, I wish to thank –

- My dearest husband Abdulrauf – I am forever grateful for your encouragement and the loving support, companionship and incredible patience through the challenging times while writing this thesis.
- My father, my brothers, my sisters – your encouragement was crucial for the completion of this work.
- My children Janait, Retal, Braah –your presence and beautiful smiles give me hope and add joy to my life.

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Chapter 1

Introduction

1.1 Topic and general background

This study deals with relative pronouns and relative clause constructions in Tripolian Libyan Arabic (TL-Arabic), a variety of Maghrebi (or Western) Arabic spoken in North Africa. As the name suggests, this variety is mainly found in the region around Tripoli, the capital of Libya; it is spoken by roughly 1.7 million people. (Versteegh, Eid, Elgibali, Woidich and Zaborski, 2011:548; Algryani, 2012:9). TL-Arabic is not used in written form and is generally found in informal settings. This is in contrast to Modern Standard Arabic (SA) which is the variety that is used, in both spoken and written form, in more formal settings, and which is additionally the language of education (Ryding, 2005:5). An empirical objective of this study is to give a description of the facts of relative pronouns and relative constructions in TL-Arabic. This will fill a gap in our knowledge of TL-Arabic since such a description has not yet been attempted in the literature. The overall aim of this study is to develop an analysis of the facts of relative pronouns and relative constructions in TL-Arabic within the framework of Minimalist Syntax, the most recent model of grammar within the generative approach to language investigation. Since there are relatively few generative studies on Arabic, and even fewer on TL-Arabic, such a minimalist study will also be of theoretical value.

An example of a TL-Arabic relative clause is given in (1) below. In this example, the relative clause contains the relative pronoun *elly* (“who”), which stands in an obligatory coreferential relationship with the subject *ar-rajl* (“the man”), its antecedent. (The relative clause is given in square brackets and the coreferential relationship is indicated by means of subscripts; these conventions will be used throughout the study.)

(1) ar-rajl$_i$ [elly$_i$ ʔšry l-ktāb] yʕyš fi Stelenbwš.
the-man rel-prn past-buy the-book pres-live in Stellenbosch
“The man who bought the book lives in Stellenbosch”

Before proceeding, some remarks are required about the orthography that is used in this study when presenting the Arabic examples. Such examples can be written either in Arabic script (as

is standard practise in Arabic countries) or in the Roman alphabet.[1] The difference between these two orthographies can be illustrated by the example in (2). It should also be noted that Arabic sentences, when given in Arabic script, are written from right to left; in Roman script, the left-to-right convention is followed.

(2) الولد الذى أنت رأيته يكون ابنى (read from right to left)

al-wld$_i$ [allaði$_i$ anta rʔuth] ykwn ibni.
The boy rel-prn you.masc past-see pres-be my-son
"The boy who you have seen is my son"

For convenience, and to ensure that the data will be accessible to readers who are not acquainted with the Arabic orthography, the Roman orthography will be used in this study. However, some of the letters/symbols that will be used do not occur in the Roman alphabet; these are listed in Appendix A, together with a brief description of their pronunciation.

1.2 Main objectives and research questions

The study has two main objectives. The first is to provide a description of the facts of relative pronouns in TL-Arabic and specifically of their morphophonological properties. In this regard, particular attention will be given to the structural positions in which relative pronouns can occur in TL-Arabic relative clauses and also to the grammatical functions of the expression containing the relative clause (e.g. subject, direct object, etc.). The second main objective is to determine whether the minimalist Nominal Shell Analysis (NSA) of restrictive relative clauses proposed for Afrikaans by Meyer (2015) can provide an adequate framework for analysing the relevant facts of TL-Arabic. To achieve this, particular attention will be given to two broad questions: (i) what are the specific steps in the derivation of restrictive relative clauses in TL-Arabic? and (ii) precisely how and by means of which mechanisms is the coreferential relationship between the relative pronoun and its antecedent established?

1.3 Organisation of the study

The rest of the study is organized as follows. Chapter 2 provides a brief description of some aspects of TL-Arabic grammar, in particular the morphosyntactic properties of the verbal complex. This description serves as general grammatical background for the discussion of relative pronouns and relative clause constructions in TL-Arabic in Chapters 3 and 5.

[1] For a description of Arabic orthography, cf. e.g. Habash (2010) and Badawi (2004).

Chapter 3 focuses on relative pronouns and relative clause constructions. A brief description will be given of the three types of relative clause that have been identified in the literature, namely restrictive relative clauses, non-restrictive relative clauses (also known as appositive relative clauses) and free relative clauses. These types of clauses will be discussed and illustrated with reference to English in section 3.2. Section 3.3 examines whether the three types of clauses also occur in TL-Arabic. In the course of the discussion in section 3.3 attention will also be given to the morphophonological form and the syntactic distribution of the relative pronoun, as well as the grammatical and functional properties of the expression containing the relative clause and its antecedent.

Chapter 4 discusses the conventional approach within generative grammar to the derivation of restrictive relative clause constructions. More specifically, the discussion will be presented within the framework of the model of grammar that is generally referred to as "Government and Binding (GB) theory". The focus will be on the various GB mechanisms that are involved in the derivation of restrictive relative clauses. In section 4.3 attention will be given to the position that a relative pronoun is taken to occupy in the left-periphery of a (restrictive) relative clause. In this regard, specific attention will be given to the Split-CP hypothesis, that is, the proposal that the CP must be split into several distinct functional projections.

Chapter 5 focuses on an analysis of restrictive relative clauses that has recently been developed as an alternative to the conventional generative analysis that is briefly outlined in Chapter 4. This alternative analysis was proposed for Afrikaans by Meyer (2015) and is largely based on on the ideas underlying Oosthuizen's (2013) Nominal Shell Analysis (NSA) of obligatory reflexivity in Afrikaans. The core hypotheses of Meyer's NSA account of restrictive relative clauses in Afrikaans will be presented and illustrated in section 5.2. Section 5.3 adresses the question whether the NSA represents an adequate framework for the analysis of the facts of restrictive relative clauses in TL-Arabic as described in Chapter 3. The main findings of the study are summarised in Chapter 6, the concluding chapter.

Chapter 2

General grammatical background

2.1 Introduction

Arabic is a widely spread language with an array of different dialects spoken in countries such as Egypt, Sudan, Algeria, Iraq and Yemen, among many others. Although mutually intelligible, Arabic dialects do differ, often substantially, from Modern Standard Arabic (SA) in terms of phonology, morphology, syntax and vocabulary. In this chapter a brief description is given of some grammatical aspects of TL-Arabic, focusing specifically on the verbal complex. This description serves as background to the discussion of relative pronouns and relative clause constructions in chapters 3 and 4. In the course of the discussion, the relevant differences between TL-Arabic and SA will also be pointed out.

2.2 Aspects of TL-Arabic grammar

The conventional word order in TL-Arabic, as in all other varieties of Arabic, is subject-verb-complement. As a member of the Semitic family of languages, TL-Arabic furthermore has a rich system of agglutinative morphology.[2] This is particulary striking in the verbal complex. In addition to the verb stem, the verbal complex contains a variety of verbal affixes, including a subject marker (SM), an object marker (OM), and affixes expressing tense/aspect (T/A) and negation (NEG). Let us first examine the characteristics of the SM. Consider the following examples (in each case the verbal complex is given in curly brackets):

(3) a. Hya {laʕb-t}.
she play+SM.3pers.sing.fem-past
“She played”

b. {laʕb-t}.
play+SM.3pers.sing.fem-past
“She played”

c. *(Hya) {laʔb}.

[2] For a discussion of Libyan Arabic, cf. e.g. Holes (2004), Versteegh et al. (2011) and Algryani (2012).

The form of the SM is determined by (i) the person, number and gender properties of the subject and (ii) the tense expressed by the sentence. Consider for example the sentences in (3a,b), both of which express the past tense. In (3a) the intransitive verbal complex contains the verb stem *laʕb* ("play") followed by the SM in the form of the suffix *-t*; this suffix expresses third person, singular, feminine [3pers.sing.fem] in agreement with the subject *hya* ("she"). The sentence in (3b) represents a "null subject" construction, that is, one that lacks an overt expression functioning as the subject. In such constructions, the entity representing the subject is indicated by the SM on its own; hence in the case of (3b), the subject is interpreted as "she", as indicated by the SM *-t*. Note that although the verb in (3a,b) is in the past tense, there is no distinct past tense affix. According to Algryani (2012:18), it could be argued that the SM, such as *-t* in (3a,b), expresses both past tense and agreement.[3]

With one exception, the SM is compulsory in TL-Arabic, as shown by the ungrammaticality of (3c). The exception is when (i) the subject refers to a third person, singular, masculine entity, and (ii) the sentence is in the past tense, as illustrated in (4) below. The declarative sentence in (4a) and the question in (4b) both occur without a SM and, although both concern a past event, the verb *laʕb* ("play") lacks a tense affix. In (4a) the subject *Ali* has the features [3pers.sing.masc]; in (4b) the subject is not phonetically realised, but it is still interpreted as referring to an entity with these features (i.e. "he").[4]

(4) a. (Ali) {laʕib⁻}.
Ali play
"Ali/he played"

b. {Laʕbº}?
play
"Did he play?"

Similar to Standard Arabic, TL-Arabic lacks a specific past tense (or perfective) form. As was noted above, it is possible that the SM *-t* also serves to express past tense, as in (3a,b) (Algryani

[3] As Algryani (2012:18) notes, an alternative view would be that the SM "expresses agreement only" and that "the past tense is an abstract morpheme". This alternative view will not be explored further here. Cf. also Versteegh et al. (2011) and the references cited by Algryani (2012).

[4] In TL-Arabic, the interrogative (or question) force of a sentence is indicated through morphophonological means. For instance, in the question (4b) the diacritic º indicates that the final consonant of the verb stem is pronounced as [b], whereas the diacritic ⁻ in (4a) indicates that the final consonant is aspirated (or pronounced as [bə]). For a description of the morphophonological means of question formation, cf. e.g. Cowan (1968); Rahman and Lum (s.a.)

2012:18; see also footnote 3). However, if the subject refers to a third person singular masculine entity, the SM is omitted, as shown in (4) above; accordingly, if the SM is taken to indicate past tense as well, this is also not grammatically expressed in such cases.

In addition to the *-t* SM illustrated in (3a,b), TL-Arabic contains several other SM forms, depending on the person, number and gender properties of the subject and also the tense expressed by the sentence. The various SM forms found in sentences expressing the past tense are illustrated by the examples in (5)-(7) (the SMs are underlined).

(5) *First person*

a. ʔne {ktəb-t̲}. (sing, fem/masc)
I write+SM.1pers.sing.fem/masc-past
"I wrote"

b. ḥny {ktəb-na̲}. (plu, fem/masc)
we write+SM.1pers.plu.fem/masc-past
"We wrote"

(6) *Second person*

a. ʔnta {ktəb-t̲} l-wažb. (sing, masc)
you write+SM.2pers.sing.masc-past the-homework
"You wrote the homework"

b. ʔnti {ktəb-ti̲} l-wažb. (sing, fem)
you write+SM.2pers.sing.fem-past the-homework
"You wrote the homework"

c. ʔntm {ktəb-tu̲} l-wažb. (plu, fem/masc)
you write+SM.2pers.plu.fem/masc-past the-homework
"You wrote the homework"

(7) *Third person*

a. Hwa {ktəb} l-wažb. (sing, masc)
he write+SM.3pers.sing.masc-past the-homework
"He wrote the homework"

b. Hya {kətb-t̲} l-wažb. (sing, fem)
she write+SM.3pers.sing.fem-past the-homework
"She wrote the homework"

c. Hmma {ktəb-u} l-wažb. (plu, fem/masc)
they write+SM.3pers.plu.fem/masc-past the-homework
"They wrote the homework"

The various SM forms illustrated in the past tense sentences in (5)-(7) are summarised in Table 1. Note that these SMs all occur as suffixes in such sentences. In present tense sentences, in contrast, the SMs corresponding to those in Table 1 show different morphophonological forms and also conventionally occur as verbal prefixes, as will be described below.

Person	Number	Gender	Affix	Verb ("write")+affix
First	S	F\M	-t	ktəb-t
	P	M/F	-na	ktəb-na
Second	S	M	-t	ktəb-t
	S	F	-ti	ktəb-ti
	P	F/M	-tu	ktəb-tu
Third	S	M	-	ktəb
	S	F	-t	kətb-t
	P	M/F	-u	ktəb-u

Table 1: SM forms in sentences expressing the past tense in TL-Arabic (based on Algryani 2012a:19)

In addition to expressing the past tense (which is assumed here to be indicated by the SM in TL-Arabic), the verb, as in SA, can also occur in the present tense (or imperfect) form.[5] As in the case of the past tense, however, the present tense is not expressed by a distinct affix but is rather indicated by the SM; the present tense form of the verb is therefore closely related to the

[5] In imperative sentences in TL-Arabic, the prefix ʔ- is normally attached to the verb stem, as shown in (ia). Note that the verbal complex in (ia) contains a SM in the form of the suffix *-i* indicating that the implied subject (i.e. the addressee) is [2pers.fem.sing]; where the subject/addressee is singular masculine, no SM is attached to the verb. In contrast, if the subject/addressee is plural the SM takes the form *-u*, irrespective of whether the subject/addressee is feminine or masculine, as shown in (ib). It should also be noted that, with some verbs, the prefix *ʔ-* is omitted, as illustrated in (ic).

(i) a. {ʔ-qr-i} l-ktab. (addressee = 2nd person, feminine, singular)
fut+read+SM.2pers.fem.sing the-book
"Read the book!"
b. {ʔ-qr-u} l-ktab. (addressee = 2nd person, feminine/masculine, plural)
fut+read+SM.2pers.fem/masc.plu the-book
"Read the book!"
c. {kul-u} l-tfaḥh. (addressee = 2nd person, feminine/masculine, plural)
eat+SM.2pers.fem/masc.plu the-apple
"Eat the apple!"

A detailed description of the imperative form of the verb in TL-Arabic falls outside the scope of the present study; for discussion, cf. e.g. Habash (2010) and Wightwick and Gaafar (2008:76-78).

person, number and gender properties of the subject (cf. Algryani 2012). To illustrate, consider the examples in (8). In (8a) the SM occurs in the form of the prefix *t-*, indicating [3pers, sing, fem] in agreement with the subject *hya* ("she"); in (8b), in contrast, the SM takes the form *y-* in accordance with the third person, singular, masculine subject *hwa* ("he"). In both cases, the SM is assumed to indicate present tense as well.

(8) a. Hya {t̲-alʕp} f-al-ḥdyqh.
she SM.3pers.sing.fem-pres+play in the garden.
"She plays in the garden"

b. Hwa {y̲-šm} l-ward.
he SM.3pers.sing.masc-pres+smell the flowers
"He smells the flowers"

The subject expressions and the SMs in (8) are all singular, and the SMs *t-* and *y-* moreover both occur as prefixes in the verbal complex. In the case of a plural subject, however, the SM occurs as a discontinuous element, namely the prefix *y-* indicating first person and feminine/masculine, and the suffix *-u* which indicates plural number.[6] This is shown by the example in (9).

(9) a. Humma {y̲-rkb-u̲} fi-s-siyyarā.
they SM.3.fem/masc.plur-pres+ride in-the-car
"They are riding in the car"

The subjects and their associated SMs in the present tense sentences in (8) and (9) are all in the third person. As illustrated by the examples in (10) and (11), the form of the SM (which is taken to indicate present tense as well) also reflects the first or second person properties of the subject. Where the subject is in the plural, the SM is expressed by both a verbal prefix and a (number) suffix, similar to the phenomenon illustrated in (9). Note that a verbal suffix is also used when the second person subject has the properties [sing, fem], as in (11a); in such cases the suffix does not indicate (plural) number, but feminine gender.

First person (sing, fem/masc)

(10) a. ane {n̲-alʕp} f-al-ḥdyqh.
I SM.1.sing.fem/masc-pres+play in-the-garden
"I am playing in the garden"

[6] Cf. e.g. Benmamoun (2000: 632), Algryani (2012a:16-17).

b. Ḥne {n-alʕp-u} f-al-ḥdyqh.
we SM.1.fem/masc-pres+play+plu in-the-garden
"We are playing in the garden"

Second person

(11) a. ʔnti {t-ākl-i} f-al-maṭʔm. (sing, fem)
you SM.2.fem-pres+eat+sing in-the-restaurant
"You are eating in the restaurant"

b. ʔnta {t-ākl} f-al-maṭʔm. (sing, masc)
you SM.2.masc.sing-pres+eat in-the-restaurant
"You are eating in the restaurant"

c. ʔntm {t-ākl-u} f-al-maṭʔm. (plu, fem/masc)
you SM.2.fem/masc-pres+eat+plu in-the-restaurant
"You are eating in the restaurant"

The various forms of the SM in sentences expressing the present tense are summarised in the following table.

Person	Number S/P	Gender F/M	Affix	PREFIX+Verb("write")+ +SUFFIX
First	S	F\M	n-	n-əktəb
	P	M/F	n-…-u	n-əktb-u
Second	S	M	t-	t-əktəb
	S	F	t- …-i	t-əktəb-i
	P	M	t-…-u	t-əktb-u
Third	S	M	y-	y-əktəb
	S	F	t-	t-əkətb
	P	M/F	y-…-u	y-əktəb-u

Table 2: SM forms in sentences expressing the present tense in TL-Arabic (based on Algryani 2012a:18)

Let us next consider sentences expressing the future tense. In SA the future tense can be expressed by means of either a separate word preceding the verbal complex, namely *sawfa* ("will"), or the verbal prefix *s-*.[7] In TL-Arabic, in contrast, the future tense is marked by one

[7] For a discussion of future tense in SA, cf. e.g. Wightwick and Gaafar (2008:18).

of two verbal prefixes, namely *b-* or *ḥā-*, as illustrated in (12). According to Algryani (2012a:20), *b-* is used to "express the future of intention", whereas *ḥā-* is used to express "a close/coming future"; *b-* also appears to be more common in informal, colloquial speech. (Note that (12b) is a null subject construction, that is, it lacks an overt expression functioning as the subject.)

(12) a. Humma {b-y-lʕp-u} f-al-ḥdyqh.
they fut+SM.3pers.fem/masc+play+plu in-the-garden
"They will play/are going to play in the garden"

b. {Ḥā-t-matr} al-yom.
fut+SM.3pers.neut+rain today
"It will rain today"

Let us next examine the characteristics of the OM in TL-Arabic. Consider the following examples. The sentence in (13a) does not contain an OM; in the other examples the OM is underlined.

(13) a. Hya {laʕb-t} b-l-kwrh.
she play+SM.3pers.sing.fem-past with-the-ball.
"She played with the ball"

b. Hya {ḍrb-t-(ha)} l-kwrah.
she kick+SM.3pers.sing.fem-past+OM.3pers.sing.fem the-ball
"She kicked it, the ball"

c. Hya {ḍrb-t-(ha)}.
she kick+SM.3pers.sing.fem-past+OM.3.sing.fem
"She kicked it"

In (13a) the verbal complex includes the verb stem *laʕb-* ("play") and the [3pers, sing, fem] SM *-t* agreeing with the subject *hya* ("she"). Note that the verbal complex does not contain an OM since the sentence lacks a direct object: the expression *l-kwrah* ("the ball") functions as the object of a preposition, represented by the prefix *b-* ("with"). The sentence in (13b), in contrast, contains an overt object expression, namely *l-kwrah* ("the ball"), as well as an optional OM in the form of *ha*; the OM agrees with the direct object expression in terms of person, number and gender. The sentence in (13c) lacks an overt direct object expression; however, in the verbal complex the transitive verb stem *ḍrb-* ("kick") co-occurs with an OM in the form of *ha* (interpreted as "it"), which expresses the same grammatical features as in (13b), namely

[3pers, sing, fem]. It must be noted, though, that the use of the OM is optional in (13b,c), as indicated by the use of the round brackets; in other words, in these sentences the OM can be omitted irrespective of whether the sentence contains an overt direct object expression or not.

In TL-Arabic the OM can take various forms, depending on the person, number and gender features of the direct object. This can be illustrated with the examples in (14)-(16). In the case of sentences such as those in (14) and (15), where the direct object refers to a first or second person entity, the OM is obligatory; more precisely, omission of the OM in such cases will result in a change of meaning, with the object understood as some unspecified third person entity or entities (corresponding to "something/some things" in English). A similar change in meaning results when the OM is omitted in sentences where the direct object refers to a third person entity/entities, as in (16a,b).

(14) *First person*

a. Hya {šaf-t-ni}. (sing, fem/masc)
she see+SM.3pers.sing.fem-past+OM.1pers.sing.fem/masc
"She saw me"

b. Hya {šaf-t-na}. (plu, fem/masc)
she see+SM.3pers.sing.fem-past+OM.1pers.plu.fem/masc
"She saw us"

(15) *Second person*

a. Hya {šaf-t-k}. (sing, fem/masc)
she see+SM.3pers.sing.fem-past+OM.2pers.sing.fem/masc
"She saw you"

b. Hya {šaf-t-km}. (plu, fem/masc)
she see+SM.3pers.sing.fem-past+OM.2pers.plu.fem/masc
"She saw you"

(16) *Third person*[8]

a. Hya {šaf-t-ha}. fi-s-siyyarā.(sing, fem)
she see+SM.3pers.sing.fem-past+OM.3pers.sing.fem the-car
"She saw the car"

[8] The examples in (16a-c) can also occur without an overt direct object expression, as shown in (ia-c), respectively:

(i) a. Hya {šaf-t-ha}. ("She saw some singular, feminine entity")
b. Hya {šaf-t-h}. ("She saw some singular, masculine entity")
c. Hya {šaf-t-hom}. ("She saw some plural, feminine/masculine enities")

b. Hya {šaf-t-h} ar-rajl. (sing, masc)
she see+SM.3pers.sing.fem-past+OM.3pers.sing.masc the-man
"She saw the man"

c. Hya {šaf-t-hom} as-ṣǵar. (plu, fem/masc)
she see+SM.3pers.sing.fem-past+OM.3pers.plu.fem/masc the-children
"She saw the children"

The following table provides a summary of the various OM forms illustrated in (13)-(16).

Person	Number	Gender	Affix	Verb("see")+affix
First	S	F\M	-ni	šaf-ni
	P	F/M	-na	šaf-na
Second	S	F/M	-k	šaft-k
	P	F/M	-km	šaft-km
Third	S	F/M	-ha	šaft-ha
	S	M	-h	šaft-h
	P	M/F	-hom	šaft-hom

Table 3: OM forms in TL-Arabic

To end this section, let us briefly consider the manner in which sentential negation is expressed. In SA, on the one hand, negation is indicated by means of a separate word which occurs to the left of the verbal complex. The form of this negative word is determined by the tense expressed by the sentence, namely *lm* (in past tense sentences), *ln* (future tense) and *la* (present tense), all meaning "not".[9] In TL-Arabic, on the other hand, sentential negation is expressed by means of two verbal affixes, namely the verbal prefix *ma-*, occuring as the leftmost member of the verbal complex, and the suffix *-š*, which occurs as the rightmost element, as illustrated in (17a). As shown by the ungrammaticality of (17b,c), these affixes are both obligatory (Algryani,

[9] The different forms of the SA negation element are illustrated in (i); for discussion, cf. e.g. Wightwick and Gaafar (2008:79-81).

(i) a. La {t-rqd-u}. (2pers-fem/masc-plu-pres)
not SM.2pers.fem/masc-pres+sleep+plu
"You are not sleeping" (addressee = plural)

b. Lm {t- ðhab-°}. (2pers-masc-sing-past)
not SM.2pers.masc-past+go+sing
"You were not going"

c. Ln {t- ðhab¯}. (2pers-masc-sing-fut)
not SM.2pers.masc-fut+go+sing
"You will not go"

2012b:16; Benmamoun, 1997:264). (The negative affixes in (17) are underlined; the suffix *-š* is glossed as NEG.)

(17) a. Humma{ma-y-šaf-u-hom-š} l-kwrat.
they not+SM.3pers.fem/masc-pres+see+plu+OM3pers.fem.plu+NEG the-balls
"They do not see the balls"

b. *Huma {y-šaf-u-hom-š} l-kwrat.

c. *Huma {ma-y-šaf-u-hom} l-kwrat.

2.3 Summary

The aim of this chapter was to provide a brief, non-formalistic description of some aspects of TL-Arabic grammar that can serve as general background for the discussion in Chapters 3 and 5. In this, the focus was on the morphosyntactic properties of the verbal complex in TL-Arabic. In addition to the verb stem, the verbal complex contains a variety of verbal affixes, including a subject marker (SM), an object marker (OM), and affixes associated with tense/aspect (T/A) and negation (NEG). The various SM and OM forms that are found in past and present tense sentences are summarised in Tables 1 and 2 above. In the next chapter we turn our attention to the facts of relative pronouns and relative clause constructions in TL-Arabic.

Chapter 3

Relative pronouns and relative clauses in English and TL-Arabic

3.1 Introduction

This chapter focuses on the phenomenon of relative clause constructions. In the literature, various types of relative clause have been identified. The first aim of this chapter is to provide a description of three of these clauses, namely restrictive relative clauses, non-restrictive relative clauses (also referred to as appositive relative clauses),[10] and free relative clauses.[11] These three types are illustrated by the English examples in (1)-(3), respectively; here and below the relative clause is given in square brackets.[12] In the course of the discussion attention will be given to the main similarities and differences between these types of relative clause. The second aim of the chapter is to describe the various relative pronouns and relative clauses in TL-Arabic.

(1) My brother [who is abroad] has sent me a letter. (My other brothers have not.).
(2) My brother, [who is abroad], has sent me a letter. (He is the only brother I have.)
(3) [What you say] is true.

Apart from this introduction, the discussion is organised into three main sections. The first, section 3.2, focuses on relative pronouns and relative clauses in English, with subsection 3.2.1 dealing with restrictive relative clauses, 3.1.3 with non-restrictive relative clauses, and 3.1.4 with free relative clauses. In the second main section, section 3.3, we turn our attention to relative pronouns and relative clauses in TL-Arabic. Subsection 3.3.1 deals with restrictive relative clauses in TL-Arabic, 3.3.2 with non-restrictive relative clauses and 3.3.3 with free relative clauses. Finally, a brief summary of the main points addressed in this chapter is provided in section 3.4.

[10] The term “non-restrictive relative clause” will be used in this study.
[11] For discussion of these three types of relative clause, cf. e.g. Bache and Jakobsen (1980), Larson (1987) and Radford (2009).
[12] These examples are taken from Zagood (2012:55).

3.2 Relative pronouns and relative clauses in English

3.2.1 Restrictive relative clauses

There are various definitions of the notion 'restrictive relative clause' in the literature. Lobeck (2000:324) states that restrictive relative clauses serve to "restrict the set of members" to which a particular nominal expression refers.[13] For example, in sentence (1) above the relative clause limits the set of individuals to which the expression *my brother* refers to one particular brother I am talking about, namely the one who is abroad, excluding any other brother(s) that I have. Similarly, Lyons (1977:761) states that restrictive relative clauses serve to provide descriptive information that enables the addressee to recognize the particular entity that is intended to be picked out by a nominal expression from a set of potential referents. To illustrate further, consider the example in (4).

(4) The book [which Peter will read] belongs to Mary.

In this example, the relative pronoun *which* occurring inside the relative clause does not on its own refer to an entity in the real or an imagined word, but rather gets its reference via the nominal expression *the book*. In other words, *which* enters into a coreferential relationship with *the book*. The relative clause as a whole serves to restrict/limit the entity that is referred to by the antecedent of *which*. In (4), the relative clause limits the referent of *the book* to a specific one, namely the one that Peter will read. In grammatical terms, the relative pronoun functions as an anaphor that is coreferential with the expression *the book*, its antecedent.

In addition to *who* and *which*, as in (1) and (4) respectively, restrictive relative clauses in English can be introduced by a range of relative pronouns, as shown in (5a-f).[14]

(5) a. The girl [**whom** you know] owns the restaurant.
b. I know the girl [**whose** sister you invited].

[13] For similar characterisations of restrictive relative clauses, cf. e.g. also Leech and Svartvik (1975).
[14] According to Newbrook (1998:45), "*who* and *whom* (and for some speakers *whose*) are confined to cases where the antecedent is human or at least personalised. *Which* is used normally only with non-human antecedents. For most speakers *that* appears with antecedent of either type." Radford (2009:227) states that the relative pronouns *what* and *how* cannot be used in either restrictive or non-restrictive relative clauses, although they do occur in free relatives (cf. section 3.2.3 below).

c. I know the place [**where** she lived].
d. I know the time [**when** they will come].
e. I know the reason [**why** he feels sick].
f. I saw something [**which** might interest you].

In English, a restrictive relative clause can also be introduced by a complementiser (e.g. *that*) in place of the relative pronouns *who*, *whom* and *which*, referred to as "*that*-relatives". In (6a,b), for example, *that* is used instead of *who(m)* and *which*, respectively. In standard varieties of English, however, these relative pronouns cannot co-occur with a complementiser, as shown by the ungrammaticality of the examples in (6c,d) (Haegeman, 1994:382-384; Radford, 2009:185, 224-5).

(6) a. The girl [**that** I know] stays in Stellenbosch.
b. The books [**that** you read] belong to me.
c. *The girl [who(m) **that** I know] stays in Stellenbosch.
d. *The books [which **that** you read] belong to me.

It is also possible for a restrictive relative clause in English to occur without a relative pronoun or a complementiser in the initial position. Such "zero-relatives" (indicated with the symbol Ø in place of the relative pronoun/complementiser) are found with clauses that could otherwise be introduced by the relative pronouns *who(m)*, *which*, *when* or *why*, or the complementiser *that*, as illustrated in (7a-d).[15] (Culicover, 2013a: 254; Sportiche, Koopman and Stabler, 2014: 407).

(7) a. The girl [Ø / who(m) / that you know] owns the house.
b. I bought the book [Ø / which / that you recommended].
c. I know the time [Ø / when / that they will leave].
d. I know the reason [Ø / why / that he feels tired].

Note that the relative clauses in (7) are all finite. In English, an infinitival clause can also function as a restrictive relative clause, as illustrated in (8). However, in contrast to finite

[15] The items introduced by the phonetically null item indicated as Ø in (7) are referred to as "silent wh-phrases" by Koopman et al. (2014: 407).

restrictive relative clauses such as those in (7), it is not possible for an infinitival relative clause to be introduced by either a relative pronoun or a complementiser; in other words, as shown in (8), the zero-relative is obligatory in such clauses.

(8) a. I know someone [Ø / *who(m) / *for to give the book to].
b. The people [Ø / *who(m) / *for to contact] are listed in the directory.

In all the grammatical examples presented above, the antecedent of the element introducing the restricted relative clause (i.e. the relative pronoun/*that*/Ø) takes the form of a common noun. In English, this antecedent cannot occur in the form of a proper noun, as shown by the ungrammaticality of the following examples (Arnold, 2004:28; Radford, 2009:226):

(9) a. *Mary [Ø / who(m) / that you met at the party] lives in Stellenbosch.
b. *I saw John [Ø / who / that went to the party].

In structural terms, a restrictive relative clause is embedded in a larger nominal expression, forming the complement of the head noun of this larger expression. In (4), for example, the relative clause represents the complement of the N *book*, which forms the head of the larger nominal expression *the book which Peter will read*, as indicated by the bracketing in (10):

(10) [The book [which Peter will read]] belongs to Mary.

In (10) the expression containing the restrictive relative clause, i.e. *the book which Peter will read*, functions as the subject of the main clause verb *belongs*. However, the expression containing the relative clause can also be used in other functions, for example as the direct object of the main clause verb or as the object of a preposition; this is illustrated by the examples in (11) and (12), respectively.[16]

(11) I know [the girl [whom you invited]].
(12) I talked to [someone [who knows you]].

[16] In some languages there are restrictions on the grammatical function of the expression containing the relative clause. For instance, as noted by Finegan (2004:239) there are some languages where relative clauses cannot occur inside an expression functioning as, e.g., an indirect object and/or a possessor expression.

According to Zagood (2012:60), in the expression containing both the restrictive relative clause and the antecedent of the relative pronoun, the relative clause is "closely tied" to the antecedent of the relative pronoun. This means that, in spoken language, the relative clause is not phonologically separated from the antecedent expression by means of a pause or a different intonation pattern; similarly, in writing, the restrictive relative clause is not set apart from the antecedent expression by "separation markers" such as commas, dashes, or parentheses. This is in contrast to non-restrictive relative clauses which are phonologically separated from the antecedent, as indicated by the use of separation markers in written language (Lyons 1977:760).[17] This distinction between the two types of relative clause is illustrated by the examples in (1) and (2) above. In (2) the non-restrictive relative clause is separated from the antecedent by means of a comma, indicating a slight pause between these two constituents when spoken; the relative clause in (2) also shows a different intonation from the one in (1).

Although there is a firm phonological attachment between a restrictive relative clause and the antecedent in sentences such as (1) (cf. also (4-7), (11-12)), the relative clause can be syntactically separated from the antecedent, that is, it can occur in a position outside of the containing nominal expression, typically further to the right in the sentence. To illustrate, consider the examples in (13). In (13a) the restrictive relative clause *whom you invited* forms part of the expression containing the antecedent *the man*; however, in (13b) this clause occurs in sentence-final position, outside of the expression containing the antecedent. This phenomenon is commonly referred to as "extraposition".[18]

(13) a. [The man [who(m) you invited]] is here.
b. The man is here [who(m) you invited].

It is possible for a restrictive and a non-restrictive relative clause to co-occur in the same containing nominal expression, with the two clauses sharing the same antecedent. However, in such sentences the restrictive relative clause comes first, nearest to the antecedent noun. For example, in (14a) the restrictive relative clause *who(m) you invited* precedes the non-restrictive relative clause *who lives in Stellenbosch;* the relative pronouns *who(m)* and *who* both take the expression *the man* as its antecedent. Note that the reverse ordering results in ungrammaticality,

[17] According to Lyons (1977:760), "non-restrictive relative clauses may have a different illocutionary force associated with them from that which is associated with the rest of the text-sentence within which they occur. In this respect they are like parenthetically inserted independent clauses".
[18] For extraposition of restrictive relative clauses, cf. e.g. Radford (2009) , Manninen (2002) and Kiss (2002)

as shown in (14b). Note also that extraposition of the restrictive relative clause is not possible "across" its non-restrictive counterpart, as shown in (14c).

(14) a. The man [who(m) you invited], [who lives in Stellenbosch], is here.
b. *The man, [who lives in Stellenbosch], [who(m) you invited] is here.
c. *The man, [who lives in Stellenbosch], is here [who(m) you invited].

3.2.2 Non-restrictive relative clauses

There are several definitions of the notion 'non-restrictive relative clause' in the literature. Lobeck (2000:324) states that non-restrictive relative clauses "do not restrict the set of members" to which a particular nominal expression refers.[19] For example, in sentence (2) above the relative clause does not serve to pick out a particular individual from a larger set of individuals representing my brothers; rather, this clause supplies additional information ("he is abroad") about a particular individual, where that individual is the only member of the set, that is, my only brother. The information supplied by the non-restrictive relative clause is moreover optional, which means that the clause could be omitted without affecting the individual's identity. According to Radford (2009**:**226) non-restrictive relative clauses serve as "parenthetical comments" or "afterthoughts"; Lyons (1977:760) similarly states that non-restrictive relative clauses "are like parenthetically inserted independent clauses".

Non-restrictive relative clauses in English differ in various respects from restrictive relative clauses, although the two types of clause also share some characteristics. Firstly, like their restrictive counterparts, non-restrictive relative clauses are introduced by a relative pronoun such as *who(m)*, *where*, *which*, *whose*, *when*, which enters into a coreferential relationship with a preceding nominal expression, its antecedent. This is illustrated by the examples in (15). However, in contrast to restrictive relative clauses, a non-restrictive relative clause cannot be introduced by either the complementiser *that* or the zero item ∅, as shown by the ungrammaticality of the examples in (16a, b).[20]

[19] For similar characterisations of non-restrictive relative clauses, cf. e.g. also Leech and Svartvik (1975), Castillo (2003), Arnold (2004) and Hofherr (2013).
[20] Cf. e.g. Zagood (2012:59).

(15) a. John, [**who(m)** you met last week], is a good friend of mine.
b. I've just come back from Libya, [**where** my parents live].
c. The dress, [**which** Mary bought at the clothes store], was bright red.
d. I met a very friendly woman, [**whose** husband works in Stellenbosch].
e. Last year, [**when** my first child was born], we still stayed in Libya.

(16) a. *Mary, **that** you met at the party, lives in Stellenbosch.
b. *John, [you met last week], is a good friend of mine.

Secondly, as was pointed out in the previous section, an infinitival clause can function as a restrictive relative clause (see the examples in (8)). This is not possible in the case of non-restrictive relative clauses, however, as illustrated by the ungrammaticality of the examples in (17) (Arnold, 2004:29).

(17) a. *The people, [(for you) to contact], are listed in the directory.
b. *He invited Mary, [(for you) to meet], to the party.

A third difference between restrictive and non-restrictive relative clauses in English concerns the nature of the antecedent. On the one hand, as was illustrated with the examples in (9), the antecedent cannot take the form of a proper noun in the case of restrictive relative clauses; with non-restrictive relative clauses, however, such an antecedent is possible, as shown in (18). On the other hand, the antecedent that is associated with a restrictive relative clause can be a quantified NP (as in (19a) and (20a) below), or a non-specific NP (what Zagood (2012:58) refers to as a "general antecedent", as in (21a)). Such quantified or general antecedents are usually not found with non-restrictive relatives, as shown by the ungrammaticality of the (b) examples in (19)-(21).[21]

(18) a. Mary, [who(m) you met at the party], lives in Stellenbosch.
b. I saw John, [who went to the party].

[21] The examples in (20) and (21) are adapted from Zagood (2012:58). It should be noted that although quantified antecedents are usually not found with non-restrictive relative clauses, there do appear to be cases where the use of such antecedents is acceptable, as in the following example (adapted from Arnold 2007:291-292).

(i) Every/No modern plane, [which may or may not have an engine in its tail], is prone to this sort of problem.

(19) a. Every student [who studied hard] will pass the test.
b. *Every student, [who studied hard], will pass the test.

(20) a. I am sure there are some people [who are never happy].
b. *I am sure there are some people, [who are never happy].

(21) a. Those [that you help] are usually satisfied.
b. *Those, [that you help], are usually satisfied.

Fourthly, as in the case of restrictive relative clauses, a non-restrictive relative clause forms part of a larger nominal phrase containing both the relative clause and the antecedent of the relative pronoun, as shown by the examples in (15). However, as was pointed out above, the non-restrictive relative clause is phonologically separated from the antecedent, as indicated by the use of separation markers in written language (e.g. commas in (15)). Furthermore, the relative clause represents the complement of the head noun of this larger expression. For example, in (15c) above the relative clause represents the complement of the N *dress*, which forms the head of the larger nominal expression *The dress which Mary bought at the clothes store*, as indicated by the bracketing in (22):

(22) [The dress, [which Mary bought at the clothes store]], was bright red.

In (22) the expression containing the non-restrictive relative clause, i.e. *the dress which Mary bought at the clothes store*, functions as the subject of the main clause (i.e. it was bright red). Similar to constructions with restrictive relative clauses, the expression containing the non-restrictive relative clause can also be used in other functions, for example as a direct object or as the object of a preposition; this is illustrated by the examples in (23a,b), respectively.

(23) a. I really like [that dress, [which Mary bought at the clothes store]].
b. I spoke with [the student, [who apparently knows you]].

Fifthly, as has already been pointed out in section 3.2.1, the two types of relative clause can co-occur in the same containing nominal expression, but in such cases the non-restrictive relative clause must follow the restrictive relative clause (cf. the examples in (14)). A sixth difference between the two types of clause concerns the phenomenon of extraposition. As was illustrated with the examples in (13), a restrictive relative clause can occur in a position outside

of the nominal expression containing the antecedent; that is, in informal terms, such a clause can be "extraposed" to a position to the right of the verb. This is not possible with non-restrictive relative clauses, as is shown by the ungrammaticality of the (b)-examples below:

(24) a. [The dress, [which Mary bought at the clothes store]], was bright red.
b. *[The dress] was bright red, [which Mary bought at the clothes store]].

(25) a. [John, [who(m) you met last week]], is a good friend of mine.
b. *[John] is a good friend of mine [who(m) you met last week].

The differences and similarities between restrictive and non-restrictive relative clauses described above can be summarised in Table 1 below (adapted from Zagood, 2012:60).

Restrictive relative clause	**Non-restrictive relative clause**
Serves to restrict the members of a set of referents by providing necessary descriptive information.	Does not restrict the members of a set of referents but provides additional, optional information about a referent(s).
Not phonologically separated from the antecedent expression by means of a pause or a different intonation pattern (or in writing by separation marks such as commas, brackets, etc.).	Phonologically separated from the antecedent expression, as indicated by the use of separation markers in written language.
Can be introduced by a relative pronoun, the complementiser *that*, or the zero item ∅.	Can only be introduced by a relative pronoun.
The relative pronoun cannot co-occur with a complementiser.	The relative pronoun cannot co-occur with a complementiser.
The antecedent cannot take the form of a proper noun.	The antecedent can take the form of a proper noun.
Can be associated with a general antecedent, e.g. one that takes the form of a quantified or a non-specific NP.	Usually not found with general antecedents.

Can be extraposed, that is, can occur to the right of the verb, outside of the expression containing the antecedent.	Cannot occur in an extraposed position.
Can take the form of an infinitival clause introduced by the zero item ∅.	Cannot take the form of an infinitival clause.
Can co-occur with a non-restrictive relative clause, with the two clauses sharing the same antecedent.	Can co-occur with a non-restrictive relative clause, with the two clauses sharing the same antecedent.
Precedes the non-restrictive relative clause when the two clauses co-occur in the same containing nominal expression.	Follows the restrictive relative clause when the two clauses co-occur in the same containing nominal expression.
Can take on any grammatical function, e.g. subject, direct object, etc.	Can take on any grammatical function, e.g. subject, direct object, etc.

Table 1: Differences between restrictive and non-restrictive relative clauses

3.2.3 Free relative clauses

A detailed description of free relative clauses falls outside the scope of this study. The discussion in this section only serves to provide a very brief characterisation, and to point out some of the main similarities and differences between free relatives and restrictive and non-restrictive relative clauses.

There are several definitions of the notion 'free relative clause' in the literature (cf. e.g. Culicover, 2013a; Ott, 2011; Radford, 2009). According to Radford (2009:226) a free relative clause is "characterised by the fact that the *wh*-pronoun *what/where/how* appears to be antecedentless, in that it doesn't refer back to any other constituent in the sentence."[22] This does not imply, however, that the free relative is without a referential function: it does refer to some entity or event, but the referent is not identified by an independently referring expression in the sentence and has to be inferred from the discourse context. In contrast to restrictive and non-restrictive relative clauses, free relative clauses in English can furthermore be used with the relative pronouns *what* and *how*, but not *which*. These characteristics of free relative clauses are illustrated by the examples in (26).

[22] In view of the fact that free relative clauses do not occur with an overt antecedent, they are sometimes also referred to as "headless" relative clauses (cf. e.g Ott, 2011:183). Cf. also Culicover (2013b:84-85) for differences and similarities between restrictive, non-restrictive and free relative clauses.

(26) a. [What she meant] is unclear.
b. I don't remember [how he prepared the dish].
c. He doesn't know [where you stay].
d. You can only show the picture to [who(m) I tell you].
e. *I saw [which might interest you].

As should be clear from the examples in (26a-d), a free relative does not represent an independent clause that can serve as a main clause: it is embedded in a larger clause. It is not clear, however, whether a free relative clause is also embedded in a larger nominal expression, as is the case with restrictive and non-restrictive relative clauses. Furthermore, although it is a clause, a free relative is nominal in character in that it "occurs in a position otherwise restricted to a DP argument" (Ott, 2011:183). For instance, in (26a) the free relative clause serves as the subject argument of the main clause, in (26b,c) as the direct object argument, and in (26d) as a prepositional argument.

3.3 Relative pronouns and relative clauses in TL-Arabic

3.3.1 Restrictive relative clauses

In Modern Standard Arabic (SA) the relative pronoun (RP) can take various morpho-phonological forms, depending on the grammatical properties of the nominal expression that it takes as its antecedent. For instance, the RP corresponding to "who" takes the form *allaði* where the antecedent has the grammatical properties [sing, masc] and *allati* where it is [sing, fem], as shown in (27). In (27a) the antecedent functions as the direct object of the matrix clause, and in (27b) as the subject.[23]

(27) a. anā {ʕ-ʔrf-(h)} ar-rajl
I SM.1pers.fem/masc.sing-pres+know+(OM.3pers.masc.sing) the-man
[allaði {y-mlk} al-manzl].
rel-prn SM3pers.masc.sing-pres+own the-house
"I know the man who owns the house"

[23] The table in the Appendix B gives a summary of the various morphohonological forms that an RP can take in SA, as determined by the gender and number properties of the expression that serves as the antecedent of the RP. For discussion of the various varieties of what is referred to as "colloquial Arabic", cf. Versteegh et al. (2011, Vol. IV:62-70).

b. al-bent [allati anta {t-ʔrf-ha}]
the girl rel-prn you SM.2pers.fem/masc.sing-pres+know+OM.3pers.fem.sing
{t-mlk} al-mnzl.
SM.3pers.fem.sing-pres+own the-house
"The girl whom you know owns the house"

According to Versteegh et al. (2011, Vol. III:419-420), relative clauses in colloquial Arabic (which includes varieties of Arabic such as those spoken in Egypt and Tunisia) "usually follow the relative pronoun *alli*", or a phonetically similar form such as *elly* in TL-Arabic (see below). It should be noted that, in informal speech, the RP is generally omitted in colloquial use when the antecedent is an indefinite expression, as shown by the Egyptian-Arabic example in (28).[24]

(28) ane {n-ʕrf} šxṣ
I SM.1pers.fem/masc.sing-pres+know someone
[(alli) {y-ʕeš } fi-ṭrabls].
rel-prn SM.3pers.masc.sing-pres+ live in-Tripoli
"I know someone who lives in Tripoli"

As in other varieties of colloquial Arabic, and in contrast to SA, the RP in TL-Arabic has a single morphophonological form, namely *elly*, which corresponds to any of the English relative pronouns "who", "which", "whose", "where", when", "why", etc. Also typical of colloquial use, the RP is omitted in TL-Arabic if the expression serving as its antecedent is indefinite. The various functions of the RP *elly* and of the expressions that can serve as its antecedent are described below. Consider, first, the grammatical function of the RP in TL-Arabic. As illustrated by the examples in (29) and (30), respectively, the RP can function as the subject and the direct object of the relative clause.

(29) *RP functioning as the subject of the relative clause*
ane {n-ʕrf-(ha)} el-bent
I SM.1pers.fem/masc.sing-pres+know+(OM.3pers.fem.sing) the-girl
[elly {ḍrb-t-(ha)} l-kwrh].
rel-prn kick+SM.3pers.fem.sing-past+(OM.3pers.fem.sing) the-ball
"I know the girl who kicked the ball"

[24] According to Versteegh et al. (2011, Vol. I:266), this convention "is not always observed" in Classical Arabic.

(30) *RP functioning as the direct object of the relative clause*

ane {n-ʕrf-(h)} ar-rajl
I SM.1pers.fem/masc.sing-pres+know+(OM.3pers.masc.sing) the-man
[elly ʔnta {dʕe-t-(h)}.
rel-prn you invite+SM.2pers.fem/masc.sing-past+(OM.3pers.masc.sing)
"I know the man whom you invited"

The RP can also function as the object of a preposition in the relative clause, as shown in (31a). In this sentence the preposition forms part of the verbal suffix *-lha* ("at her"), with *-ha* representing the OM. Although less common, the preposition and its object complement can also occur as a separate word in the form of *leha*, where *le-* represents the preposition "at" and *-ha* the [3pers, sing, fem] pronoun "her". If the separate prepositional expression *leha* is used, the verbal suffix *-lha* has to be omitted; that is, the two elements cannot co-occur, as shown in (31b).[25]

(31) *RP functioning as the object of a preposition in the relative clause*

a. ane {n-ʕrf-(ha)} el-bent
I SM.1pers.fem/masc.sing-pres+know+(OM.3pers.fem.sing) the-girl
[elly ʔnta {sof-t-l.ha}].
rel-prn you look+SM.2pers.fem/masc.sing-past+at.OM.3pers.fem.sing
"I know the girl whom you looked at"

[25] The preceding observations about sentences in which the RP functions as the object of a preposition in the relative clause also hold for constructions where the RP functions as the indirect object, as in (i). Similar to (31b), a sentence such as (ia) can contain a separate prepostional expression, *leha* ("to her"), but in such cases the verbal suffix *-lha* ("to-her") must be omitted.

(i) a. ane {n-ʕrf-(ha)} el-bent
I SM.1pers.fem/masc.sing-pres+know+(OM3pers.fem.sing) the-girl
[elly ʔnta {ware-t-l.ha} l-ktab].
rel-prn you show+SM.2pers.fem/masc.sing-past+to-OM.3pers.fem.sing the-book
"I know the girl whom you showed the book to"

b. ane {n-ʕrf-(ha)} el-bent
I SM.1pers.fem/masc.sing-pres+know+(OM.3pers.fem.sing) the-girl
[elly ʔnta {ware-t-(*l.ha)} l-ktab le-ha].
rel-prn you show+SM.2pers.fem/masc.sing-past+to-OM.3pers.fem.sing the-book to-her
"I know the girl whom you showed the book to"

b. ane {n-ʕrf-(ha)} el-bent
I SM.1pers.fem/masc.sing-pres+know+(OM.3pers.fem.sing) the-girl
[elly ʔnta {sof-t-(*l.ha)}] le-ha.
rel-prn you look+SM.2pers.fem/masc.sing-past+at.OM.3pers.fem.sing at-her
"I know the girl whom you looked at"

Note that the suffix *-lha* in (31a) and the prepositional expression *leha* in (31b) both represent "stranded" elements occurring to the right of the verb. As illustrated by the ungrammaticality of (32), the preposition cannot be "pied-piped" in TL-Arabic, that is, it cannot occur together with the RP *elly* to the left of the verbal complex.

(32) *ane {n-ʕrf-(ha)} el-bent
I SM.1pers.fem/masc.sing-pres+know+(OM.3pers.fem.sing) the-girl
[le-ha elly ʔnta {sof-t}].
at-her rel-prn you look+SM.2pers.fem/masc.sing-past

The RP *elly* is also used in possessive constructions, that is, as a pronoun that corresponds to the English pronominal element "whose". This use of the RP is illustrated in the following example:

(33) ane {n-ʔrf-(ha)} el-bent
I SM.1pers.fem/masc.sing-pres+know+(OM.3pers.fem.sing) the-girl
[elly xwha ʔnta {dʔe-t-(h)}].
rel-prn brother you invite+SM.2pers.fem/masc.sing-past+(OM.3pers.masc.sing)
"I know the girl whose brother you invited"

In addition to the functions illustrated in (29-31) and (33), the RP can also function as an adverbial expression in the relative clause; in (34a), for example, the RP serves as a locative/place adverbial, in (34b) as a time adverbial, and in (34c) as an adverbial expressing reason.

(34) a. *RP functioning as an adverbial of place in the relative clause*
ane {n-ʕrf-(h)} l-mkān
I SM.1pers.fem/masc.sing-pres+know+(OM.3pers.masc.sing) the-place
[elly hya {ʕaš-t} feh].
rel-prn she live+SM.3pers.fem.sing-past in-it
"I know the place where she lived"

b. *RP functioning as an adverbial of time in the relative clause*

ane {n-ʔrf-(h)} al-wqt
I SM.1pers.fem/masc.sing-pres+know+(OM.3pers.masc.sing) the-time
[elly hya {b-t-mši } feh].
rel-prn she fut+SM.3pers.fem/masc+go in-it
"I know the time when she/he will go"

c. *RP functioning as an adverbial of reason in the relative clause*

ane {n-ʔrf-(h)} as-sbab
I SM.1pers.fem/masc.sing-pres+know+(OM.3pers.masc.sing) the-reason
[elly hwa {y-šʔr-h} btʔb].
rel-prn he SM.3pers.sing.fem-pres+feel+OM.3pers.fem.sing tired
"I know the reason why he feels tired"

Consider, next, the grammatical function of the expression in the matrix clause that serves as the antecedent of the RP. As illustrated in (35)-(37), the antecedent can function as the subject, the direct object and the object of a preposition in the matrix clause.

(35) *Antecedent functioning as the subject of the matrix clause*

ar-rajl [elly ʔnta {t-ʕrf-h}]
the-man rel-prn you SM.2pers.fem/masc.sing-pres+know+OM.3pers.masc.sing
{y-mlk-(h)} al-hoš.
SM.3pers.masc.sing-pres+own+(OM.3pers.masc.sing) the-house
"The man who(m) you know owns the house"

(36) *Antecedent functioning as the direct object of the matrix clause*

ane {šof-t-(h)} ar-rajl
I see+SM.1pers.fem/masc.sing-past+(OM.3pers.masc.sing) the-man
[elly {y-mlk-(h)} al-hoš].
rel-prn SM.3pers.masc.sing-pres+own+(OM.3pers.masc.sing) the-house
"I saw the man who owns the house"

(37) *Antecedent functioning as the object of a preposition in the matrix clause*

ane {qʕd-t} mʕ ar-rajl
I stay+SM.1pers.fem/masc.sing-past with the-man
[elly {y-mlk-(h)} al-hoš].
rel-prn SM.3pers.masc.sing-pres+own+(OM.3pers.masc.sing) the-house
"I stayed with the man who owns the house"

3.3.2 Non-restrictive relative clauses

Non-restrictive relative clauses in TL-Arabic differ from restrictive relative clauses, although the two types of clause also share some characteristics. Like their restrictive counterparts, non-restrictive relative clauses are also introduced by the relative pronoun *elly*, which enters into a coreferential relationship with a preceding nominal expression, its antecedent. This is illustrated by the examples in (38). However, as shown by the ungrammaticality of (39), non-restrictive relative clauses in TL-Arabic usually cannot be introduced by the zero item Ø.[26]

(38) Al-gfṭān, elly Mary {ʔ-šra-th}
the dress rel-prn Mary SM.2pers.fem.sing.past+buy+OM.2pers.fem.sing
mn mḥl al-mlabs kān aḥmr faqʕ.
from shop clothes past.be red bright
"The dress, which Mary bought at the clothes store, was bright red"

(39) *Ahmed, ʔnta qablth lsboʕ lmaḍ{y-kun} sahib kwayes.
Ahmed you met week last SM.2pers.masc.sing.pres+be friend a good

In the case of non-restrictive relative clauses in TL-Arabic the relative pronoun *elly* also corresponds to any of the English relative pronouns "who", "which", "whose", "where", when", "why", etc.

As is the case in English (see the examples in (18) above), the antecedent can furthermore take the form of a proper noun in the case of non-restrictive relative clauses in TL-Arabic. This is illustrated by the example in (40). However, in contrast to English, in TL-Arabic a non-restrictive relative clause can be associated with a general antecedent, that is, a quantified NP or a non-specific NP, as shown by the examples in (41)-(43).[27]

(40) Mary, elly ʔnta qablth fi l-haflh {t-ʕaš }
Mary rel-prn you met in the-party SM.2pers.fem.sing-pres+live
fi Stellenbosch.
in Stellenbosch
"Mary, [who(m) you met at the party], lives in Stellenbosch"

[26] Though cf. the observation in note 27 below.
[27] The examples in (41) and (42) can also be used without the relative pronoun *elly*.

(41) kl ṭālb elly {qray}
every student rel-prn study.SM.3pers.sing.masc-past
bjed {b-y-ejtaz} l-ektbar.
hard fut+SM.3pers.fem/masc+pass the-test
"Every student, [who studied hard], will pass the test"

(42) ane {n-ʕrf} bʕḍ a-nās elly
I SM.1pers.fem/masc.sing-pres+know some people rel-prn
{mā-y-kan-u-š} sʕdʔ.
never+SM.3pers.fem/masc-pres+be+plu+NEG happy
"I know some people, [who are never happy]"

(43) haðm elly ʔnta {saʕd-t-(hom)}
those rel-prn you help+SM.3pers.sing.masc-past+OM.3pers.plu.fem/masc
{y-kun-u} ʕadt raḍyen.
SM.3pers.fem/masc-pres+be+plu usually satisfied
"Those, [that you help], are usually satisfied"

As in the case of restrictive relative clauses, the expression containing the non-restrictive relative clause in TL-Arabic can serve to express various grammatical functions. For example, in (44) this expression serves as the subject of the main clause, in (45) as the direct object and in (46) as the object of a preposition.

(44) al-gfṭān, elly Mary {ʔ-šra-th}
the dress rel-prn Mary SM.2pers.fem.sing.past+buy+OM.2pers.fem.sing
mn mḥl al-mlabs kān aḥmr faqʕ.
from shop clothes past.be red bright
"The dress, which Mary bought at the clothes store, was bright red"

(45) ane ʕjabni halba al-gfṭān elly Mary
I like really that-dress rel-prn Mary
{ʔ-šra-th} mn mḥl al-mlabs.
SM.1pers.fem.sing.past+buy+OM.1pers.fem.sing from shop clothes
"I really like that dress, which Mary bought at the clothes store"

(46) ane {t-kalem-t} mʕ
I SM.1pers.masc/fem.sing.past+speak+OM.1pers.masc/fem.sing with
e- ṭālb elly aḍni {y-ʕrf-k}.
the-student rel-prn apparently SM.1pers.masc.sing+know+OM.2pers.masc/fem.sing
"I spoke with the student, who apparently knows you"

It is possible for a restrictive and a non-restrictive relative clause in TL-Arabic to co-occur in the same containing nominal expression, with the two relative pronouns sharing the same antecedent. However, in contrast to English where the non-restrictive relative clause must follow the restrictive relative clause (cf. the examples in (14)), these two clauses can occur in either order in TL-Arabic. For example, in (47) the restrictive relative clause precedes the non-restrictive relative clause, whereas the opposite order is found in (48); both sentences are grammatical. Note also that, as in English, extraposition of the restrictive relative clause in TL-Arabic is not possible "across" its non-restrictive counterpart, as shown in (49).

(47) ar-rajl elly ʔnta {dʕe-t-h}
the-man rel-prn you SM.2pers.fem/masc.sing-pres+invite+OM.3pers.masc.sing
elly {y-ʕeš} fi Stellenbosch hne.
rel-prn SM.3pers.masc.sing-pres+live in Stellenbosch is-here
"The man who(m) you invited, who lives in Stellenbosch, is here"

(48) ar-rajl elly {y-ʕeš} fi Stellenbosch
the-man rel-prn SM.3pers.masc.sing-pres+live in Stellenbosch
elly ʔnta {dʕe-t-h} hne
rel-prn you SM.2pers.fem/masc.sing-pres+invite+OM.3pers.masc.sing is-here
"The man who lives in Stellenbosch, who(m) you invited, is here"

(49) *ar-rajl elly {y- ʕeš} fi Stellenbosch
the-man rel-prn SM.3pers.masc.sing-pres+live in Stellenbosch
hne elly ʔnta {dʕe-t-h}.
is-here rel-prn you SM.2pers.fem/masc.sing-pres+invite+OM.3pers.masc.sing

In TL-Arabic, non-restrictive relative clauses can be extraposed to a position to the right of the verb, as shown in the following example:

(50) al-gfṭān, kān aḥmr faqʕ elly Mary
The dress was red bright rel-prn Mary
{ʔ-šra-th} mn mḥl al-mlabs.
SM2pers.fem.sing.past+buy+OM2pers from shop clothes
"The dress was bright red, which Mary bought at the clothes store"

3.3.3 Free relative clauses

The discussion in this section serves to provide a very brief characterisation of free relative clauses in TL-Arabic, and to point out some of the main similarities and differences between free relatives and restrictive and non-restrictive relative clauses in TL-Arabic.

In a free relative clause the pronoun *elly*, which corresponds to any of the English relative pronouns *what/who(m)/which*, appears to be without an overt antecedent, that is, it does not refer back to any other constituent in the sentence. Furthermore, the pronoun *elly* can be used in free relative clauses with the interpretation "what", "who(m)" and "which", but not "how" and "where". This is in contrast to English where free relative clauses can be used with the relative pronouns *what* and *how*, but not *which* (cf. section 3.2.3). The characteristics of free relative clauses just mentioned are illustrated by the in TL-Arabic examples in (51).

(51) a. elly hya {qsd-t-h}
rel-prn she mean+SM.3pers.sing.fem-past+OM.3pers.sing.masc
{y-kun} ǵer wadh.
SM.3pers.fem/masc-pres+be unclear
"What she meant is unclear"

b. *ane {ma-n-ðkr-š}
I not+SM.1pers.sing.fem/masc-pres+remember+NEG
keef hwa hder e-ṭbq.
how he prepared the-dish
"I don't remember how he prepared the dish"

c. *Hwa {ma-y-ʕrf-š} ween ʔnta qaʕd.
he not+SM.3pers.sing.masc-pres+know+ NEG where you stay
"He doesn't know where you stay"

d. ʔnta tqdr {t-wari} e-ṣorh
you can SM.2pers.masc.sing-pres+show the-picture
fqṭ le elly ane nqol-hom-lk.
only to rel-prn I tell-they-you
"You can only show the picture to who(m) I tell you"

e. ane {šof-t} elly mrāt yʕjb-k.
I see+SM.1pers.sing.fem/masc-past rel-prn might interest-you
"I saw what might interest you"

3.4 Summary

This chapter dealt with the phenomenon of relative clause constructions. More specifically, the aim was to describe three types of relative clause that have been identified in the literature, namely restrictive relative clauses, non-restrictive relative clauses and free relative clauses. These three types were described with reference to English in section 3.2. In the course of the discussion attention was given to the various relative pronouns in English, as well as the grammatical functions and syntactic distribution of relative pronouns and their antecedents. In section 3.3 we turned our attention to relative pronouns and relative clause constructions in TL-Arabic, focusing specifically on the following four general questions:

(i) Which relative pronouns (RPs) are found in TL-Arabic, and what are their morpho-phonological properties?
(ii) Do the three types of relative clause discussed in section 3.2 – i.e. restrictive relative clauses, non-restrictive relative clauses, and free relative clauses – also occur in TL-Arabic?
(iii) What are the structural positions in which a relative pronoun can occur in TL-Arabic relative clauses, and in which grammatical functions can it be used (e.g. subject, direct object, etc.)?
(iv) In which grammatical functions can the expression serving as the antecedent of the relative pronoun be used?

In contrast to Modern Standard Arabic, which has several distinct RPs, it was shown that TL-Arabic has only one RP, namely *elly*, which corresponds to a range of RPs in English, including "who", "what, "where", etc. In section 3.3.1 a description was given of restrictive relative clauses in TL-Arabic. It was shown in the course of the discussion that the RP *elly* can be used

in various grammatical functions, namely that of subject, direct object and prepositional object of the relative clause; in addition, it was shown that this RP can occur in possessive constructions and can also serve to express adverbial functions such as time, place and reason. In section 3.3.1 attention was also given to the grammatical function of the expression in the matrix clause that serves as the antecedent of the RP. It was illustrated that the antecedent can function as the subject, the direct object and the object of a preposition in the matrix clause. Finally, a brief description of the morphosyntactic characteristics of non-restrictive relative clauses and free relative clauses in TL-Arabic was provided in sections 3.3.2 and 3.3.3 respectively.

Having provided a description of the facts of relative pronouns and relative constructions in English and TL-Arabic, we turn our attention next to the syntactic derivation of, specifically, restrictive relative clause constructions. In this regard, Chapter 4 will provide some theoretical background, focusing specifically on the formal mechanisms that are claimed in the generative literature to be involved in the derivation of such constructions in English, as well as the structural position that is occupied by a relative pronoun in the left-periphery of a clause.

Chapter 4

The derivation of restrictive relative clause constructions in generative grammar

4.1 Introduction

Numerous analyses of (restrictive) relative clause constructions have been presented in the generative literature.[28] A comprehensive overview of these analyses is however beyond the scope of this study. Rather, the present chapter is intended to provide brief theoretical background for the analysis of restrictive relative clauses in TL-Arabic to be presented in Chapter 5. The discussion will be presented within the theoretical framework of generative grammar, and more specifically within the model of grammar that is generally referred to as Government and Binding (GB) theory.[29] The focus will be on (i) the various GB mechanisms that are commonly taken to be involved in the derivation of restrictive relative clauses, that is, clauses that serve to restrict the set of members to which a particular nominal expression refers, and (ii) the structural position in the left-periphery of such a clause that is occupied by the phrase containing the relative pronoun. An example of a restrictive relative clause in English is given in (1). In this sentence the relative clause is introduced by the relative pronoun *which*. As indicated by the subscripts, this pronoun stands in a coreferential relationship with the subject of the main clause, *the book*, the latter representing the antecedent of the pronoun. (Here and below, the relative clause is given in square brackets and the relative pronoun in bold.)

(1) The book$_i$ [**which**$_i$ Peter will read] belongs to Mary.

It should be noted that the coreferential relationship between the relative pronoun and its antecedent has received hardly any attention in the generative literature.[30] However, an account of this relationship lies at the core of Meyer's (2015) analysis of restrictive relative clauses in Afrikaans, which will be set out in Chapter 5.

The rest of this chapter is organized into two main sections. Section 4.2 focuses on *Wh*-Movement, a core mechanism in GB theory that serves to raise *wh*-phrases (that is, phrases containing question words such as *who*, *what*, *where*, etc. as well as relative pronouns) into the left-periphery of a clause. Section 4.2.1 deals with the application of this operation in the

[28] Cf. e.g. Adger and Ramchand (2005), Authier and Reed (2005), Borsley (1992), Sag (1997).
[29] GB-theory was the most influential model of grammar during the 1980s and early 1990s. For the main assumptions, modules and mechanisms of GB-theory, cf. e.g. Chomsky (1981, 1985); Haegeman (1994), Hornstein, Nunes and Grohmann (2005); Ouhalla (1999).
[30] Though cf. the proposals in Adger and Ramchand (2005).

derivation of non-echo *wh*-questions and section 4.2.2 with its role in the derivation of restrictive relative clauses. The discussion in these two subsections will be illustrated with examples from English. The second main section, section 4.3, focuses on the structure of the left-periphery of a clause. More specifically, attention will be given to the Split-CP hypothesis according to which the complementiser (C-) domain is split into several distinct functional categories, one of which is claimed to provide the particular landing site for raised *wh*-phrases in the derivation of (restrictive) relative clauses. A brief summary of the main ideas discussed in this chapter is provided in section 4.4.

4.2 A GB analysis of restrictive relative clauses

This section describes the main movement operation that is involved in the derivation of restrictive relative clauses, namely *Wh*-Movement. To start, section 4.2.1 describes the role that this mechanism plays in the derivation of *wh*-questions in English. In the course of the discussion, attention will be given to the expressions that can undergo *Wh*-Movement as well as their landing site, that is, the position into which they are moved. Against this background, section 4.2.2 focuses on the application of *Wh*-Movement in the derivation of restrictive relative clauses.

4.2.1 Wh-Movement in the derivation of questions

Wh-Movement is the core mechanism involved in the derivation of non-echo *wh*-questions, that is, interrogative sentences that cannot be answered with a simple "yes" or "no". Examples of such sentences are given in (2).

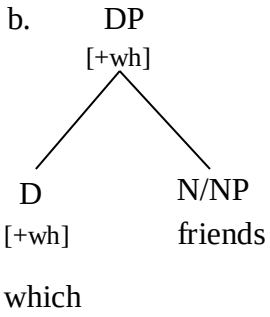
(2) a. [**What**] will they eat?
b. [**Which** friends] have you invited to the party?
c. [**Who(m)**] have you given the book to?

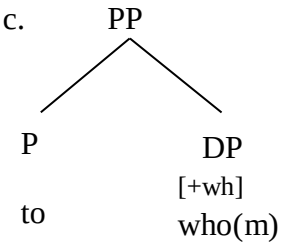
These sentences all contain a (bracketed) *wh*-phrase, that is, a phrase that has a *wh*-word (or question word) as one of its constituent parts. The set of *wh*-words in English includes the pronouns or pronoun-like elements *what, who(m), which, whose, when, where* and *how*. *Wh*-words are commonly described as carrying a particular grammatical feature, namely [+wh], which distinguishes them from non-*wh*-elements. In both (2a,b) the *wh*-phrase represents a nominal expression, which is generally analysed as a determiner phrase (DP). In (2c) the *wh*-expression is included in a prepositional phrase (PP). The structure of the three *wh*-phrases in (2) can be represented in simplified form as in (3a-c), respectively. Note that the *wh*-word *what*

in (2a), which is conventionally analysed as a D, simultaneously represents the head and the maximal projection of the *wh*-phrase; the noun *friends* in (2b) likewise simultaneously represents the N head of the NP and the NP itself. Furthermore, in each of the phrases in (3) the [+wh] feature carried by the *wh*-word percolates to the phrase headed by this word.[31]

(3)

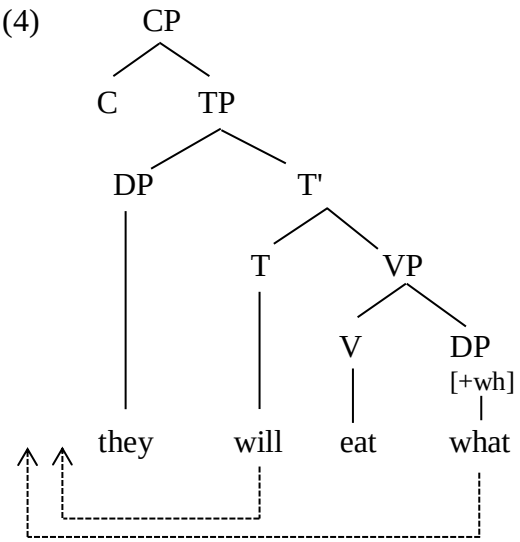
a.
DP
[+wh]
what

b.


c.


In all the examples in (2), the *wh*-phrase occurs in clause-initial position. However, in each case this represents a derived position, that is, not the position which it initially occupied in the structure. In both (2a,b) the *wh*-phrase represents the direct object argument of the verb, which means that it initially entered the structure as the complement of the V. The structure underlying the sentence in (2a), for instance, will thus be along the lines of (4). As illustrated by means of the arrows in (4), the derivation of the sentence in (2a) involves two movement operations: (i) the modal auxiliary *will* is moved to a position to the left of the subject DP *they* and (ii) the *wh*-phrase *what* is moved into sentence-initial position. The mechanisms responsible for the respective movements are conventionally referred to as Inversion and *Wh*-Movement.[32]

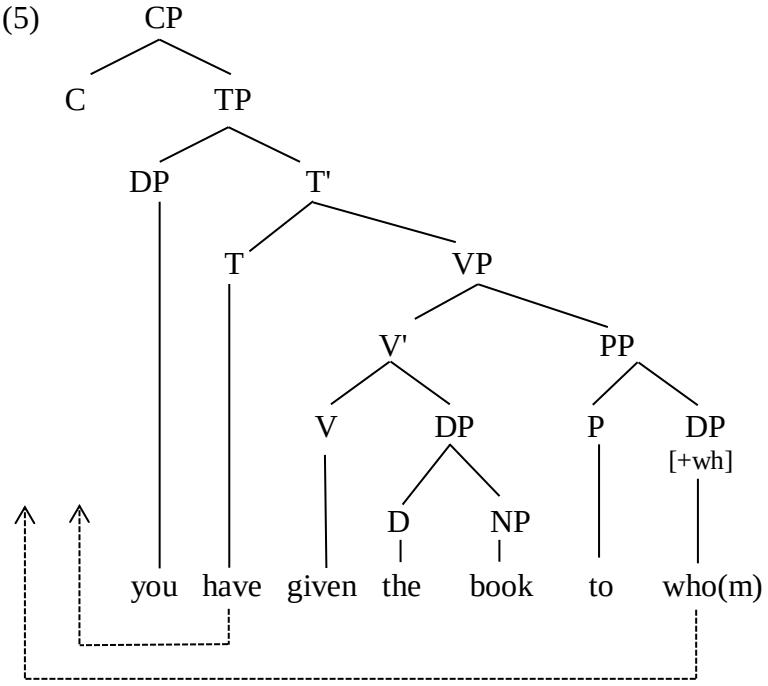
(4)



[31] For discussion of feature percolation, cf. e.g. Cowper (1984) and Haegeman (1994:374).
[32] For more discussion of Inversion and *Wh*-Movement, cf. e.g. Haegeman (1994:371-2), O'Grady, Dobrovolsky and Katamba (1996:203-204), and Radford (2004:188-189).

The PP containing the *wh*-phrase in (2c) likewise enters the structure in some position to the right of the V since it functions as the indirect object argument in the sentence. The structure underlying (2c) may therefore be represented as in (5). The same two operations that were applied in the derivation of (2a) also feature in the case of (2c), as shown by the arrows in (5). Note that the *wh*-phrase is moved out of the PP, with the head of the PP, that is the P *to*, staying behind. This phenomenon is generally referred to as "preposition-stranding".[33]

(5)



In English, it is also possible for a preposition to be fronted along with its *wh*-complement, a phenomenon known as "pied piping". In the case of (5), for instance, the PP containing the *wh*-phrase *who(m)* can be fronted as a whole, with the P *to* also being raised:

(6) **To who(m)** have you given the book __?

The question that now arises concerns the landing sites of the elements affected by Inversion and *Wh*-Movement, that is, the positions into which the relevant elements are moved. Consider, firstly, the landing site of fronted auxiliaries such as the modal and aspectual auxiliaries in the examples in (2) and (6). It is generally assumed in the literature that Inversion moves elements into a position in the complementiser domain of the clause, in other words, into a position within

[33] For the phenomenon of preposition stranding, and also pied-piping (see below), cf. e.g. Haegeman (1994:375) and Radford (2004:211-217).

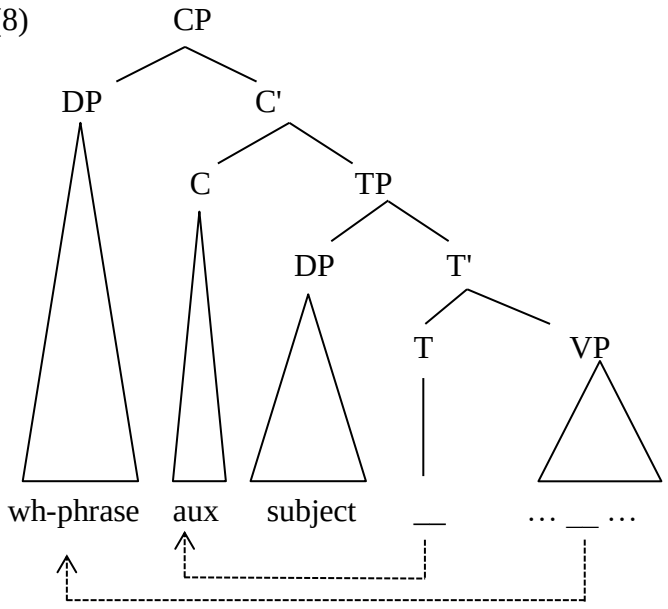
the CP. In the case of (5), for example, the auxiliary *have* would be raised into the phonetically empty C position, an instance of head-to-head movement, also referred to as "T-to-C Raising". In standard varieties of English, this operation is restricted to the derivation of direct questions (also referred to as "root questions") such as those in (2) and (6). To put it differently, Inversion is not applied in the derivation of indirect questions (or embedded questions), at least in standard varieties of English, as illustrated by the difference in grammaticality between the examples in (7) (the embedded clauses are given in brackets).

(7) a. I know [**what** they will eat _]

b. *I know [**what** will they _ eat _]

Consider, secondly, the landing site targeted by *Wh*-Movement. As shown in (5), the *wh*-phrase is raised into the leftmost position of the clause, occurring directly before the fronted auxiliary. Given that the auxiliary in sentences like those in (2) and (6) occupies the C position, it follows that the *wh*-phrase is raised into the specifier position of the CP ([spec, CP]).[34] The structure that is derived by Inversion and *Wh*-Movement in the case of (2a) could thus be represented in simplified schematic form as in (8).

(8)



[34] For more discussion of the landing site of *Wh*-Movement, cf. e.g. Baltin (1982:17-22), Haegeman (1994:376-381), Koopman (1997:26), Ouhalla (1999:72-80), O'Grady et al. (1997:211) and Radford (2004:204-206).

In all the examples discussed thus far, the *wh*-phrase undergoes "short movement" in the sense that its landing site and the position in which it was initially generated both form part of the same minimal clause. It is however possible for a *wh*-phrase to be moved out of one clause into the [spec, CP] position of a next higher clause, as illustrated in (9). In this example the *wh*-phrase *what* originates as the direct object complement of the verb *eat* in the (bracketed) subordinate clause.

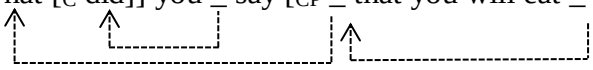
(9) What did you say [$_{CP}$ that you will eat _]?

The derivation of the sentence in (9) involves three movement operations. Firstly, the *wh*-phrase *what* is moved to the specifier position under the CP of the subordinate clause, as shown in (10). Notice that Inversion is not applied in the subordinate clause, since the C position is already filled by the complementiser *that*; the auxiliary *will* thus remains in its original position to the right of the (embedded) subject *you*.

(10) You did say [$_{CP}$ **what** that you will eat _]

The next two steps in the derivation involve moving the *wh*-phrase into the [spec, CP] position of the main clause, and raising the auxiliary *did* into the C position:

(11) [$_{CP}$ what [$_{C}$ did]] you _ say [$_{CP}$ _ that you will eat _]



It was noted above that the auxiliary in the subordinate clause in (11) does not undergo Inversion since the C is already filled by the over complementiser *that*. In standard varieties of English, a *wh*-phrase may also not co-occur with an overt complementiser. In other words, [spec, CP] is ruled out as the final landing site for such a phrase if the head of the CP is filled by a complementiser, as illustrated by the ungrammaticality of the sentences in (12). This constraint on *Wh*-Movement is referred to in the literature as the Multiply (or Doubly) Filled COMP filter.[35] Note that (11) is not ruled out by the filter since [spec, CP] of the subordinate clause is an intermediate landing site for the *wh*-phrase, not the final one.

[35] For the Multiply Filled COMP filter, cf. e.g. Haegeman (1994:373-383), Koopman (1997:17-20) and Radford (2004:230-231). It should be noted, however, that some non-standard varieties of English do allow a *wh*-phrase to co-occur with an overt complementiser, as in the examples below:

(i) a. I wonder [which dress that she chose to wear]
b. I don't really know [what kind of man that he is]

(12) a. *He told me [**what** that he wanted to eat _]

b. *I wonder [**which** book whether he will buy _]

In earlier versions of generative grammar, the operations performed by movement rules were subject to various grammatical constraints (or conditions).[36] In GB-theory, many of these were subsumed under a single constraint known as the Subjacency condition on movement. Haegeman (1994:402) states this condition as follows:

(13) Movement cannot cross more than one bounding node, where **bounding nodes** are IP and NP [i.e. TP and DP, respectively, in more recent generative works – SA].

To illustrate the effect of Subjacency, consider the following example adapted from Haegeman (1994:403) (where t represents the trace (or, in more recent studies, the copy) of the fronted *wh*-phrase *how*):

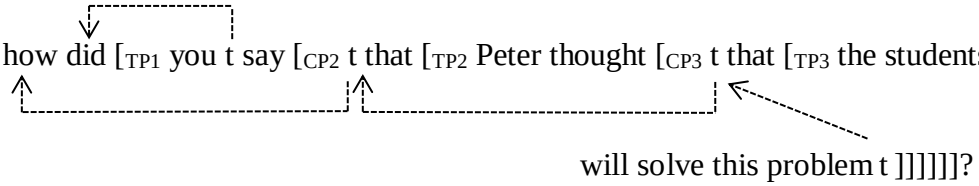
(14) [$_{CP1}$ how did [$_{TP1}$ you say [$_{CP2}$ that [$_{TP2}$ Jeeves thinks [$_{CP3}$ that [$_{TP3}$ Lord Emsworth will solve this problem t]]]]]]?

In (14) the *wh*-phrase *how* is moved out of the lowest CP, CP_3, and ends up in the leftmost position of the sentence, that is, in [spec, CP_1]. In the process, the *wh*-phrase crosses three bounding nodes, namely the lower TP_3, the middle TP_2, and the matrix TP_1. In terms of Subjacency, however, movement may cross at most one bounding category, which means that a single long-distance movement operation as indicated by the arrow in (14) is ruled out by this constraint. In order to account for the grammaticality of (14), it is proposed that fronting of the *wh*-phrase involves three shorter movements instead of a single long one. First, the *wh*-phrase is raised to [spec, CP_3], crossing one bounding node, TP_3. Next, the *wh*-phrase is raised from [spec, CP_3] into [spec, CP_2], again crossing only one bounding node, TP_2. Finally, the *wh*-phrase is raised into [spec, CP_1], crossing only the bounding node TP_1. Subjacency is therefore not violated by any of the three applications of *Wh*-Movement, which accounts for the grammaticality of the sentence. The derivation can be represented as in (15); note that Inversion

[36] For discussion of various constraints/conditions on movement operations, cf. e.g. Baltin (1982), Chomsky (1973), Haegeman (1994), Radford (2004) and Ross (1967).

of the auxiliary *do* also took place in the main clause. In each movement operation, a trace/copy of the moved phrase stays behind in the position from which movement takes place.

(15) [$_{CP1}$ how did [$_{TP1}$ you t say [$_{CP2}$ t that [$_{TP2}$ Peter thought [$_{CP3}$ t that [$_{TP3}$ the students will solve this problem t]]]]]]?

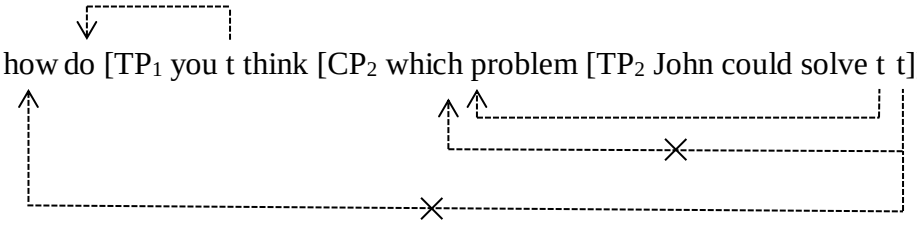


Consider in contrast the ungrammatical sentence in (16).

(16) *How do you think which problem the students will solve?

This sentence contains two *wh*-phrases, *how* and *which problem*. The *wh*-phrase *which problem*, on the one hand, was raised into the [spec, CP] position of the subordinate clause. This operation is allowed in terms of Subjacency since only one bounding node is crossed, namely TP. On the other hand, the *wh*-phrase *how* was moved into the [spec, CP] position of the main clause. Note that this phrase cannot first be raised to the specifier position of the subordinate clause CP, since this position is already filled by the *wh*-fronted expression *which problem*. This means that *how* has to be raised in one step from its original position in the subordinate clause into its eventual landing site in the main clause. In the process, two bounding nodes would be crossed, namely the TP of the subordinate clause and the TP of the main clause, as shown in (17). Since this constitutes a violation of Subjacency, the sentence is ruled out as ungrammatical.

(17) *[CP_1 how do [TP_1 you t think [CP_2 which problem [TP_2 John could solve t t]]]]]]?



Having briefly discussed the role of *Wh*-Movement in the derivation of *wh*-questions, we turn our attention next to the application of this rule in the derivation of restrictive relative clauses.

4.2.2 *Wh*-Movement in the derivation of restrictive relative clauses

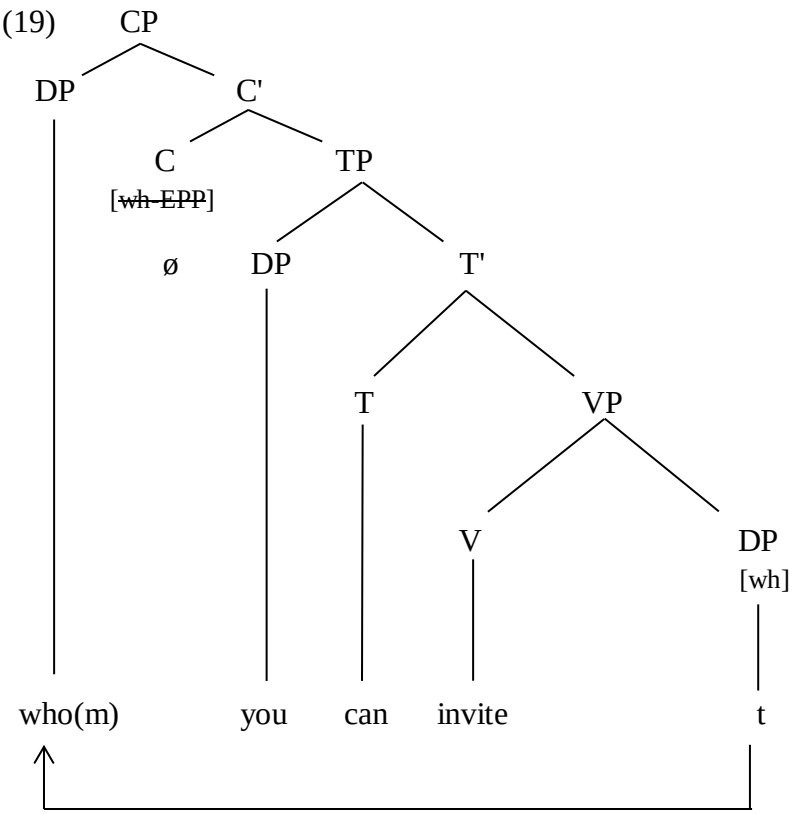
This section deals with the derivation of restrictive relative clause constructions in English. Recall that a restrictive relative clause serves to limit the set of members to which a particular nominal expression refers (see section 3.2.1 above and the references cited there). Examples of such clauses are given in (18). In (18a) the relative clause is introduced by a relative pronoun and in (18b) by the complementiser *that*; (18c) contains neither a relative pronoun nor a complementiser. (Here, and below, the relative clause is given in square brackets and the relative pronoun in bold.)

(18) a. I know someone [**who(m)** you can invite].
b. I know someone [that you can invite].
c. I know someone [you can invite].

It is commonly assumed in the generative literature that a relative clause such as the one in (18a) is derived by means of *Wh*-Movement. In this case, the relative pronoun *who(m)* represents the direct object argument of the verb *invite*. This implies that the pronoun initially occupies a position directly to the right of the verb. In the course of the derivation, the DP *who(m)* is raised by *Wh*-Movement into the specifier position of the embedded CP, leaving behind a trace (or copy) of itself in the vacated position. This operation is illustrated in the structure in (19).[37] According to Radford (2004:240), the C indicated as ø in (19) is "perhaps a null counterpart of *that*" which carries a [WH-EPP] feature that triggers the application of *Wh*-Movement.[38]

[37] As pointed out in section 4.2.1, Inversion does not apply in subordinate clauses in standard varieties of English. The modal auxiliary in (19) is accordingly not raised into the C position.
[38] Radford (2004:239-240) states that the EPP (Extended Projection Principle) specification carried by the *wh*-feature of the C in (19) "obliges it [i.e. the C – SA] to extend a specifier", with the *wh*-feature serving to attract "the closest maximal projection containing a *Wh*-phrase to move to spec-CP"; in the process the C's feature is erased. For more discussion of the EPP, cf. e.g. Castillo (2003:31) and Ouhalla (1999:124-126).

(19)



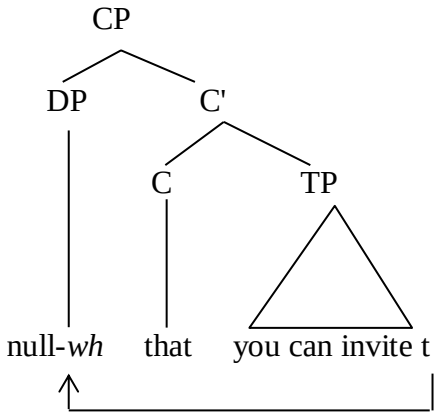
As discussed in section 4.2.1, if the *wh*-phrase represents the DP complement of a preposition in a non-echo *wh*-question, *Wh*-Movement can front either the DP on its own, leaving behind the preposition (i.e. prepostion stranding), or the preposition can be pied-piped together with the raised *wh*-DP. This phenomenon is also found with relative clauses introduced by a *wh*-relative pronoun:

(20) a. I know someone [**who(m)** you can give the book to _]

b. I know someone [**to who(m)** you can give the book _]

According to the Relative Pronoun Spellout Condition put forward by Radford (2004:239-240), a *wh*-fronted relative pronoun occurring in the specifier position of a relative clause can optionally have a null spellout in the phonological component. This condition would then account for the example in (18c) above: although *Wh*-Movement was applied in the derivation of the relative clause in this sentence, the *wh*-fronted relative pronoun occurs in covert form. Note that the relative clause in (18b) also lacks an overt relative pronoun; in this case the clause is introduced by the complementiser *that*. Assuming that the derivation of relative clauses always involves the application of *Wh*-Movement, the structure of the relative clause in (18b) would be along the following lines (where "null-*wh*" represents the covert *wh*-expression):

(21)



The item *that* in a relative clause such as the one in (18b) behaves in much the same way as other pronouns like *which*, *who*, etc. Hence Radford (2004:228) raises the possibility of analysing this item not as a complementiser, but as a relative pronoun that is moved into the complementiser position of the relative clause in the course of the derivation.[39] On such an analysis, the item *that* in (18b) would represent a relative pronoun that serves as the direct object argument of the verb *invite*. In the course of the derivation, *that* is raised by *Wh*-Movement into the C-position, leaving behind a trace (or copy) of itself in the vacated position. According to Radford (2004: 228-231), this analysis can account for several properties of relative *that*. Firstly, in contrast to a *wh*-pronoun, the relative pronoun *that* can introduce a finite relative clause like the one in (18b) above but not an infinitival relative clause, as shown by the ungrammaticality of the example in (22).

(22**)** *The boys are looking for a place [**that** to play football].

Secondly, the relative pronoun *that* is invariable in form; for instance, it does not take different case forms in contrast to, for example, the relative pronoun *who* that takes the genitive case form *whose*:

(23) *I know the boy [that's book was stolen]

Thirdly, unlike *wh*-pronouns, the relative pronoun *that* does not allow pied-piping of a preposition as shown by the difference in grammaticality between the sentences in (24).

(24) a. I know the girl [**that** you gave the book to _].
b. *I know the girl [**to that** you gave the book _].

[39] For *that*-relatives, cf. also e.g. Haegeman (1994:390) and Ouhalla (1999:77-81).

Fourthly, it was pointed out in section 4.2.1 that a *wh*-phrase cannot co-occur with an overt complementiser. This constraint is expressed by the Multiply (or Doubly) Filled COMP filter. If the element *that* in a relative clause such as (18b) and (24a) represents a relative pronoun, this constraint should therefore rule out sentences where *that* co-occurs with a complementiser. This is indeed the case, as illustrated by the ungrammaticalty of the example in (25) containing *that* in the specifier position of the complementiser *for*.

(25) *He recommended someone [**that** for you to talk to _]

4.3 The Split-CP hypothesis

As pointed out in the previous section, it is generally assumed in the GB literature that non-echo *wh*-questions and restrictive relative clauses are derived by means of *Wh*-Movement. The effect of this operation is that a *wh*-phrase (i.e. a phrase containing a question word or a relative pronoun) is raised into the specifier position of the CP. Since the late 1990s, however, it has been argued that the CP must be split into a number of functionally distinct categories, each heading its own projection (cf. e.g. Rizzi 1997; Belletti 2004; Benincà and Poletto 2004; Paoli 2007; Radford 2009). The present section provides a short overview of the main claims of this Split-CP hypothesis. More specifically, and based primarily on the proposals in Rizzi (1997) and Benincà and Poletto (2004), the discussion will deal with four types of category that are claimed to make up the left-periphery of a clause (i.e. the conventional C-domain), namely Force, Topic, Focus and Finiteness. It must be noted, though, that a detailed discussion of these categories, and of the ordering relationships between them, falls outside the scope of this study. Instead, only brief attention will be given to those aspects that relate to the analysis of restrictive relative clauses in TL-Arabic in Chapter 5.

Analysed as a CP, the left-periphery of a clause provides two potential landing sites for raised constituents. Firstly, in constructions where the C is not filled by an overt complementiser such as *that* or *if*, it can be targeted by a head-to-head movement operation such as Inversion/T-to-C Raising in English, which serves to raise an auxiliary verb into the C position. Secondly, the specifier position of the CP can be targeted by a movement operation, such as *Wh*-Movement, which serves to raise a phrasal constituent into the leftmost position of the clause. The effects of these raising operations have been illustrated in (8) and (11) above. Besides *wh*-phrases, various other types of phrasal constituents can also occur in the left-periphery of a clause. For

example, in (26a) the leftmost position is occupied by a focalised phrase, that is, a phrase that serves to introduce new information into the discourse context and that is usually intonationally marked by focal stress (indicated in the examples by means of small caps; cf. e.g. Rizzi, 1997:285 and Benincà and Poletto, 2004:56). As shown in (26b) this phrase has been raised from its original position as complement of the P *for*; notice that Inversion has also applied in the derivation of this sentence.

(26) a. *NO OTHER TEAM* will he play for.

b. [$_{CP}$ *NO OTHER TEAM* [$_{C}$ will] [$_{TP}$ he [$_{T}$_] [$_{VP}$ [$_{V}$ play] [$_{PP}$ [$_{P}$ for _]]]]]

Now compare (26a) with the example in (27). Here the focalised phrase, presumably occupying the specifier position of the CP, is *preceded* by the overt complementiser *that*, which is clearly problematic for the conventional analysis of the CP employed up to now. Furthermore, assuming that the complementiser occupies the C position, the question arises which landing site is targeted by Inversion, that is, which category the auxiliary *will* is raised to.

(27) John assured me [that *NO OTHER TEAM* will he _ play for _].

Two other constructions that are very similar to focus constructions are those containing a topicalised constituent and a left-dislocated constituent. To illustrate, consider the sentences in (28) (based on the examples provided by Rizzi (1997:285-6)).

(28) a. *THAT BOOK* you should give _ to Paul (not this one).

b. *That book*, you should give _ to Paul (not to Bill).

c. *That book*, I have read *it*.

In (28a) the phrase *that book* carries focal stress and represents a focalised constituent, that is, one that serves to express new information. In (28b), in contrast, *that book* represents the topic of the sentence, which Rizzi (1997:285) describes as "a preposed element characteristically set off from the rest of the clause by 'comma intonation' and normally expressing old information, somehow available and salient in previous discourse".[40] The phrase *that book* in (28c) represents a left-dislocated (LD) phrase, a type of topic constituent that co-occurs with a so-called resumptive pronoun, in this case the pronoun *it*, which is coreferentially associated with the LD phrase.

[40] According to Gundel and Fretheim (2004:181), "Topics are relationally given, by definition, in the sense that they are what the sentence/utterance is about. They provide the context for the main predication, which is assessed relative to the topic."

In terms of the conventional CP analysis of the left-periphery, the focus, topic and LD phrases in (28) would each occupy the specifier position of the CP. However, as illustrated by the examples in (29), these phrases can co-occur, also with a *wh*-phrase, in the C-domain.[41] This is clearly problematic since the CP only allows for one specifier position.

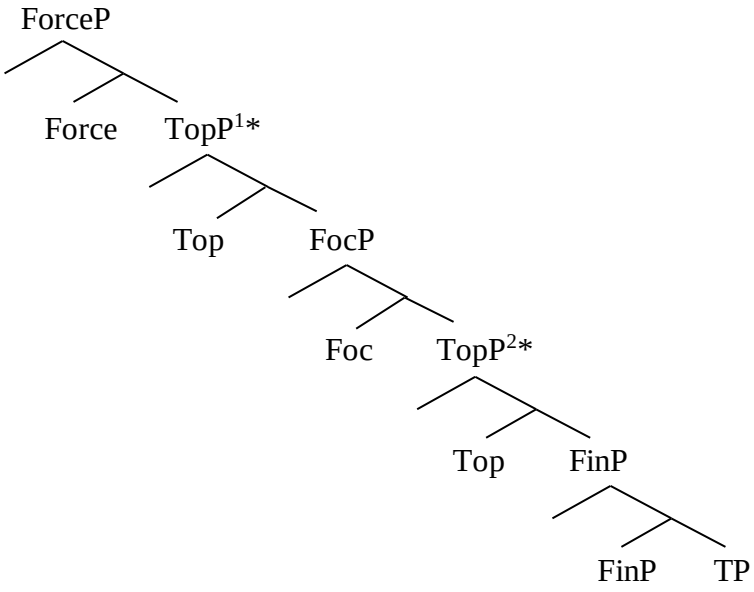
(29) a. *That man, him* I know well. (LD + focus phrase)

b. *The plumber, when* will he come? (LD + *wh*-phrase)

c. *Your dad, his passport, where* did he lose it? (LD + LD + *wh*-phrase)

In view of problems such as those illustrated in (27) and (29) facing the CP analysis of the left-periphery, Rizzi (1997) proposed an alternative analysis in the form of the Split CP hypothesis. In terms of this hypothesis the CP is split into four functionally distinct categories, each heading its own projection with a specifier position that could serve as the landing site of a raised constituent. These categories are Force, Topic (Top), Focus (Foc), and Finiteness (Fin), hierarchically organised as in (30) (slightly adapted from Rizzi, 1997:298). Note that this schema provides for two structural positions for topic phrases, one above and one below the FocP. The TopPs can moreover be recursive, indicated by the asterisks, which means that more than one topic phrase can occur above or below the FocP.[42]

(30)



[41] These examples are taken from Oosthuizen (2016:51-52).

[42] Based on examples from Italian, Rizzi (1997:290) contends that "A clause can contain as many topics as are consistent with its (topicalizable) arguments and adjunts (*sic*); on the other hand, there is a unique structural focus position, focalization of two elements … is excluded". He (1997:290-1) goes on to state that "A focus and one or more topics can be combined in the same structure. In that case, the focal constituent can be both preceded and followed by topics".

Consider firstly the Fin head in (30). Rizzi (1997:284) states that "we should think of finiteness as the core IP-related characteristics [i.e. TP-related, in more recent generative works - SA] that the complementizer system expresses", where these characteristics include the tense and associated features of the TP such as subject-verb agreement and mood distinctions (indicative, subjunctive, conditional, etc.). Secondly, in terms of the Split-CP hypothesis complementisers such as *that* and *if* are located under the Force head (Rizzi, 1997:325) and serve to "express the fact that a sentence is a question, a declarative, an exclamative, a relative, a comparative, an adverbial of a certain kind, etc." (Rizzi, 1997:283).[43] This would account for the linear ordering in (27) where the complementiser *that* precedes the focus phrase *no other team*. Thirdly, in non-echo *wh*-questions the preposed *wh*-phrase is claimed to occupy the specifier position of the FocP (Rizzi, 1997:289, 325).[44] Given that a left-dislocated phrase is located in the specifier position of the TopP[1] in (30) (cf. Rizzi, 1997:285-6; Benincà and Poletto 2004: 63-4), this analysis of preposed *wh*-phrases can account for the linear ordering of LD and *wh*-phrases in interrogative sentences such (29b,c) above. The ordering between the focus phrase *him* and the LD phrase *that man* in (29a) can similarly be explained by locating the LD phrase in [spec, TopP[1]]. Finally, and of importance for the present study, Rizzi (1997:325) states that "Straightforward distributional evidence suggests that relative pronouns are in the Spec of Force, while interrogative pronouns in main questions compete with focussed (*sic*) phrases in the Spec of Focus." Such a [spec, ForceP] analysis of relative pronouns is supported by the word order facts in examples such as those in (31) and (32). In Rizzi's (1997:289) Italian example in (31a) the phrase containing the relative pronoun, i.e. the PP *a cui* ("to whom"), precedes the LD phrase *il premio Nobel* ("the Nobel prize") which occupies the specifier position of the TopP[1]; and in the (non-standard) Afrikaans example in (32a) the relative pronoun *waar* ("where") precedes the complementiser *dat*, which is taken to be the head of the ForceP.[45] In both cases the inverted order of the relevant constituents results in ungrammaticality, as shown by the (b) examples.

(31) a. Un uomo a cui, il premio Nobel, lo daranno senz'altro.[46]
"A man to whom, the Nobel prize, they will give it undoubtedly"

b. *Un uomo, il premio Nobel, a cui lo daranno senz'altro.
"A man, the Nobel prize, to whom they will give it undoubtedly"

[43] However, according to Rizzi (1997:325), "prepositional complementizers in Romance are in Fin".
[44] Rizzi (1997:291) states that "A Wh-operator in main questions is compatible with a Topic … whereas it is incompatible with a Focus"; cf. also Rizzi (1997:325).
[45] The Afrikaans examples have been provided by Johan Oosthuizen (personal communication).
[46] Rizzi (1997:289) does not provide morpheme-for-morpheme literal translations of the Italian examples.

(32) a. Die plek waardat hy gebly het.
the place where-that he stay has
"The place where he stayed"

b. *Die plek dat waar hy gebly het.

Focusing largely on topic and focus constructions, Benincà and Poletto (2004) subsequently proposed several changes to Rizzi's (1997) analysis of the C-domain as represented in the schema in (30). Consider firstly the functional category Topic. The two TopPs in (30) are both claimed to be recursive. According to Benincà and Poletto, however, Universal Grammar does not provide for such a possibility; as they (2004:52) put it, "There is a one-to-one relation between position and function ... This means that recursion of a projection is not admitted." Benincà and Poletto furthermore argue against the idea of two separate Top heads, one located above the FocP and one below it, as provided for in (30). They (2004:63) instead claim that there is a single topic "field" consisting of two "subfields", defined by two distinct heads, namely Hanging Topic (HT) and Left Dislocation (LD).[47] This Topic field is located immediately above the FocP and, as illustrated by the the Italian examples in (33), the HT expression must precede the LD expression (Benincà and Poletto 2004:64).

(33) a. Giorgio, ai nostri amici, non parlo mai di lui. (HT - LD)
Giorgio to the our friends not talk ever of him
"Giorgio, to our friends, I never talk of him"

b. *Ai nostri amici, Giorgio, non parlo mai di lui. (LD - HT)
to our friends Giorgio not talk never of him

[47] According to Benincà and Poletto (2004:64), "LD elements maintain the preposition of the internal elements they correspond to, but HTs can only be DPs" This is shown by the HT and LD examples in (ia,b) respectively.

(i) a. Mario, non ne parla piú nessuno.
Mario not of-him talks anymore nobody
'Mario, nobody talks of him anymore.'

b. Di Mario, non (ne) parla piú nessuno
of Mario not (of-him) talks anymore nobody
'Of Mario, nobody talks of him anymore.'

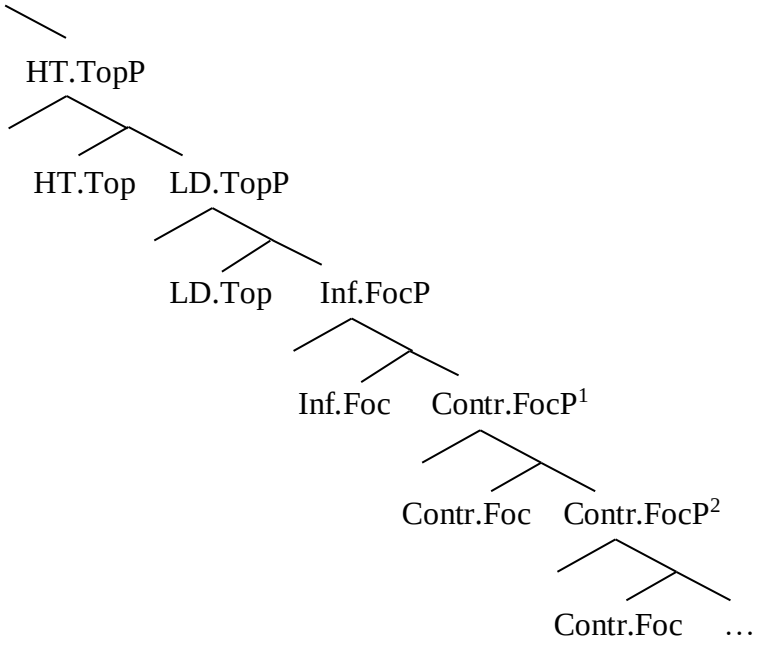
Benincà & Poletto (2004:64) furthermore claim that, at least in Italian, only one HT is allowed in the left-periphery of a clause whereas it is possible to have more than one LD, as shown by the difference in grammaticality between the examples in (iia,b). (It is not clear, however, how the multiple occurence of LD espressions can be made compatible with the disallowance of recursivity mentioned above.)

(ii) a. *Gianni, questo libro, non ne hanno parlato a lui. (HT - HT)
Gianni this book they of-it haven't talked to him

b. A Gianni, di questo libro, non gliene hanno mai parlato. (LD - LD)
to Gianni of this book they of it haven't talked to him
'They did not talk to Gianni about this book'

Consider secondly the functional category Focus. Benincà and Poletto (2004:57) claim that, similar to Topic, "Focus can also host more than one element, each with a peculiar function … Hence, FocP is not a single XP but a 'field' ". On their analysis, this field comprises at least three distinct heads, namely an Informative Focus head and two Contrastive Focus heads, with Informative Focus occurring immediately above Contrastive Focus.[48] In hierarchical terms, the Topic and Focus subfields are organised as in (34).[49]

(34) …



As regards the Contr.FocPs in (34), Benincà and Poletto (2004:61) state that "there must be at least two Contrastive Focus projections available in the CP structure: one hosting adverbs or objects, and one devoted to circumstantial and quantificational adverbs." The specifier of the Inf.FocP is claimed to be the landing site for raised *wh*-phrases in non-echo *wh*-questions.

4.4 Summary

This chapter dealt with the derivation of restrictive relative clause constructions within the generative approach to grammatical analysis, and more specifically the theoretical framework

[48] Gundel & Fretheim (2004:180) describe the two distinct types of Focus as follows: "One of these is relational – the information predicated about the topic [i.e. Informative Focus - SA]; the other is referential – material that the speaker calls to the addressee's attention, thereby often evoking a contrast with other entities that might fill the same position [i.e. Contrastive Focus - SA]."

[49] Although not discussed by Benincà and Poletto (2004), it is assumed that the HT.TopP in (34) is preceded by a ForceP and that the Contr.FocP^2 is followed by a FinP, similar as in the schema in (30).

of Government and Binding (GB) theory. The aim of the chapter was to provide some theoretical background for the analysis of restrictive relative clauses in TL-Arabic to be presented in Chapter 5. The discussion was organized into two main sections. Using illustrative examples from English, section 4.2 focused on *Wh*-movement, the core GB mechanism that is involved in moving *wh*-phrases into the left-periphery of a clause. The role of *Wh*-Movement in the derivation of non-echo *wh*-questions was examined in section 4.2.1; brief attention was also given to some of the constraints on this operation, including Subjacency and the Multiply Filled Comp Filter. Against this background, section 4.2.2 dealt with the role of *Wh*-Movement in the derivation of restrictive relative clauses. It was found that this operation takes place in exactly the same manner as with the derivation of non-echo *wh*-questions. In the course of the discussion attention was also given the proposal by Radford (2004) that the element *that* in English can be analysed as a relative pronoun in constructions where it introduces a relative clause. The second main section, 4.3, focused on the structural position occupied by a *wh*-phrase, in both non-echo *wh*-questions and relative clauses, after having been fronted by *Wh*-Movement. The discussion focused specifically on the Split-CP hypothesis as set out by Rizzi (1997) and Benincà and Poletto (2004). According to this hypothesis the conventional CP is split into several distinct functional heads, each with its own projection, namely Force (the location of complementisers such as *that* and *if*), Topic, Focus and Finiteness; ForceP forms the highest and FinP the lowest functional projections in the C-domain. Rizzi (1997:289, 325) claims that the *wh*-phrase containing the relative pronoun occupies the specifier position of the ForceP, an issue to which we return in Chapter 5; in contrast, the *wh*-phrase introducing non-echo *wh*-questions occupies the specifier position of the FocP (cf. also Benincà and Poletto (2004:57-61).

Having briefly examined the derivation of relative clauses within the framework of generative grammar, and more specifically within GB theory, the question that remains is how the coreferential relationship between a relative pronoun and its antecedent can be accounted for. This question has not received systematic attention in the generative literature. However, as was noted in section 4.1, this relationship lies at the core of the alternative nominal shell analysis of restrictive relative clauses, which forms the topic of the next chapter.

Chapter 5

A nominal shell analysis of restrictive relative clauses in TL-Arabic

5.1 Introduction

The aim of this chapter is to develop an analysis of restrictive relative clauses in TL-Arabic, one which can account for the TL-Arabic facts presented in Chapter 3. The analysis will be developed within the theoretical framework set out by Meyer (2015) in his description of restrictive relative clauses in Afrikaans. This framework is based on the core ideas of Oosthuizen's (2013) Nominal Shell Analysis (NSA) of obligatory reflexivity in Afrikaans. A brief description of the nominal shell analysis of restrictive relative clauses in Afrikaans set out in Meyer (2015) is given in section 5.2. In developing the TL-Arabic analysis in section 5.3, the focus will be on two main questions. Firstly, do the assumptions and devices put forward by Meyer (2015) provide an adequate framework for the description of the structural properties of restrictive relative clauses in TL-Arabic? Secondly, can the obligatory coreferential relationship between a relative pronoun and its antecedent in TL-Arabic be adequately accounted for within this framework? A summary of the main findings of the investigation is presented in section 5.4.

5.2 An NSA approach to restrictive relative clauses in Afrikaans

This section provides a brief description of the analysis of restrictive relative clauses in Afrikaans put forward by Meyer (2015). This analysis is developed within the framework of ideas underlying Oosthuizen's (2013) nominal shell analysis of obligatory reflexivity in Afrikaans. Before starting, however, some general background information is provided about relative pronouns and restrictive relative clause constructions in Afrikaans.

According to Meyer (2015:42-44), there are several different types of relative pronoun in Afrikaans. These include *wat* ("who(m)", "which"), *wie* ("who(m)"), *waar* ("where") and *wanneer* ("when") to indicate things, individuals, places and times,[50] as well as *hoe* ("how") to

[50] For a description of the various relative pronouns in Afrikaans, cf. e.g. Donaldson (1994:493-494) and Meyer (2015:44). It should be noted that Afrikaans relative pronouns are not morphologically marked in any way, e.g. for person, number or gender. Also, the form *wat* ("who(m)", "which") is used on its own for both animate and inanimate entities, whereas *wie* is standardly used together with a preposition and then only when the antecedent refers to one or more human enities, as in (i):

(i) Die man/mans met wie (*wat) jy gesels het.
the man/men with who(m) you talk have
"The man/men who(m) you talked to"

indicate the manner in which something is done or the way something appears or is experienced, and *hoekom* and *waarom* ("why") to indicate the reason why something is done or appears the way it does. Possessive relative pronouns occur in two forms: *wie se* ("whose", i.e. the pronoun plus the possessive marker *se*) is used when the pronoun takes an animate antecedent, and *waarvan* is used with inanimate antecedents. Meyer (2015:44-46) provides the following examples illustrating the use of these pronouns. (Here and below the relative clauses are given in square brackets and the relative pronouns in bold.)

(1) Ek ken die liedjie [**wat** sy sing].
I know the song which she sings
"I know the song which she is singing"

(2) Hy roep die meise [met **wie** jy gepraat het].
he calls the girl with who you spoke have
"He is calling the girl with whom you spoke"

(3) Ek ken die hotel [**waar** hy bly].
I know the hotel where he stays
"I know the hotel where he stays"

(4) Hy bevestig die tyd [**wanneer** hy sal kom].
he confirms the time when he will come.
"He is confirming the time when he will come"

(5) Ek hou van die manier [**hoe** sy geantwoord het].
I like of the way how she answer has
"I like the way she has answered"

(6) Ek verstaan nie die rede [**hoekom/waarom** jy wil bedank] nie.
I understand not the reason why/wherefore you want-to resign not
"I don't understand the reason why you want to resign"

(7) Ek ken die man [**wie** se huis jy gekoop het].
I know the man who-POSS house you bought have
"I know the man whose house you have bought"

(8) Ek het 'n fiets [**waarvan** die wiele pap is].
I have a bicycle which-of the wheels flat are
"I have a bicycle of which the wheels are flat"

As described in Chapter 3, in English a restrictive relative clause can be introduced by the complementiser *that* in place of the relative pronoun (so-called "that-relatives"); moreover, it is also possible for a restrictive relative clause in English to occur without a relative pronoun or a complementiser in the initial position ("zero (Ø)-relatives"). Neither of these two options is possible in Afrikaans; in other words, the relative pronoun cannot be omitted in Afrikaans and cannot be substituted by the complementiser *dat* ("that"), as illustrated in (9).

(9) a. Ek ken die man [**wat** jy ontmoet het].
I know the man who you met have
"I know the man who you have met"

b. *Ek ken die man [dat / Ø jy ontmoet het].

Let us now consider the core assumptions and devices of Meyer's (2015) nominal shell analysis of restrictive relative clauses in Afrikaans. For ease of presentation, the discussion will be restricted to restrictive relative clauses that are introduced by the relative pronoun *wat* ("who", "which"), and where this pronoun takes as its antecedent a nominal expression functioning as the direct object argument of the matrix clause. Meyer (2015:46) provides the following example of such a sentence (see also the example in (1) above).

(10) Pieter sien die huis$_i$ [**wat**$_i$ Jan bou].
Pieter sees the house which Jan builds
"Pieter sees the house that Jan is building"

A core hypothesis of Oosthuizen's (2013) analysis of obligatory reflexivity in Afrikaans is that a reflexive pronoun and the expression that serves as its antecedent are initially merged together in the same nominal shell construction that is headed by a light noun *n*, specifically an identity-focus light noun (i.e an *n* with the feature [id-focus]). In such a construction the pronoun serves as the complement of the *n*, and the antecedent expression as its specifier (Oosthuizen 2013:32-42). The antecedent expression enters the derivation with valued phi (φ)-features (i.e. person, number, gender), whereas the pronoun and the light noun are both unvalued for these features. According to Oosthuizen (2013:45-46), the coreferential relationship between the pronoun and its antecedent is established through φ-feature valuation: the latter expression values the φ-features of the pronoun, with the light noun serving as intermediary. In the course of the derivation the antecedent is then raised into its eventual surface position.

Taking these ideas as point of departure, Meyer (2015:56-57) proposes that the relative pronoun and its antecedent are also initially merged in a light noun construction, with coreferentiality established through φ-feature valuation. In the case of the example in (10), therefore, the nominal shell construction containing the relative pronoun *wat* and its antecedent *die huis* ("the house") would be along the following lines:

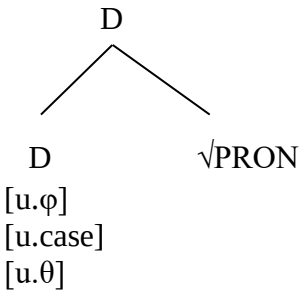
(11) $[_{n\mathrm{P}}{}^{2}$ [antecedent] $[_{n\mathrm{P}}{}^{1}$ *n* – relative pronoun]]

The question that now arises concerns the specific type of light noun heading the construction in (11). As mentioned above, this *n* is claimed to be an identity-focus light noun in the case of reflexive constructions: it serves to formally express the function of the reflexive pronoun, namely to emphasise or draw "attention to the relationship of referential identity" (Oosthuizen 2013:41) between the reflexive and some other nominal expression in the sentence. In the case of relative clauses, however, the function of such a clause (or of the relative pronoun which it contains) is not to emphasise or draw attention to an identity relationship. Rather, the relative clause serves to modify the antecedent of the relative pronoun. For instance, in (10) the relative clause *wat Jan bou* ("that Jan is building") picks out one entity from a set of potential referents, that is, it identifies a specific house, the one that Jan is building, and in so doing sets it apart from any other member of the general set of houses (or the more specific set of houses that are being built). Meyer (2015:58-59) accordingly proposes that the light noun mediating between the relative pronoun and its antecedent in the construction in (11) is a contrastive-focus light noun, that is, an *n* with the feature [con-focus]. As mentioned above, the coreferential relationship between the relative pronoun and its antecedent is established via φ-feature valuation, with the [con-focus] light noun serving as intermediary.

In terms of these proposals, the analysis of a restrictive relative construction such as the one in (10) will be along the following lines. First, the relative pronoun *wat* ("which", "that") is formed by merging a category-neutral lexical root √PRON and a D-constituent resulting in the extended category D shown in (12) (Meyer, 2015:58).[51] This D, which represents the relative pronoun, contains at least three types of feature, namely φ-features, a theta (θ)-feature and a case feature, which are all unvalued at this stage. (Here and below unvalued features are indicated by the abbreviation [u] and valued features by [v].)

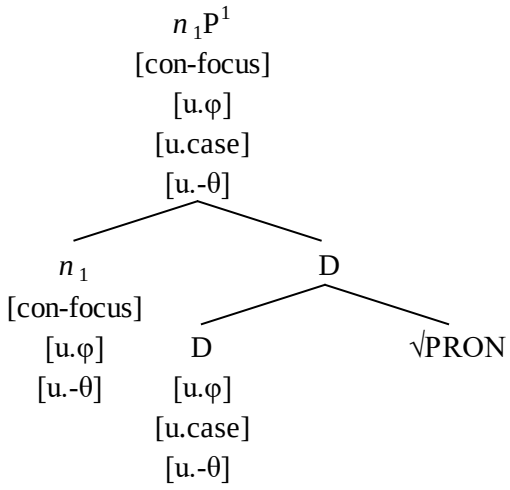
[51] For discussion of a similar merger operation in the case of reflexive pronouns, cf. Oosthuizen (2013:42) and the references cited there.

(12)



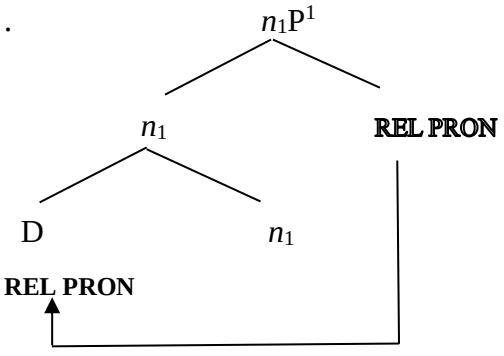
The D in (12) is next merged as the complement of the contrastive-focus light noun, which also contains unvalued φ-, θ- and case features. The resulting *n*-projection is as follows (Meyer, 2015:59):

(13)



The derived D (i.e. the relative pronoun) in (13) is next copied and merged with the n_1 head, an instance of head raising, as illustrated in (14) (Meyer, 2015:59).[52] In (14), as in (13), no feature valuation can occur between the light noun and the relative pronoun since the features of both are unvalued. (Here and below the copy of a raised element is given in outline font.)

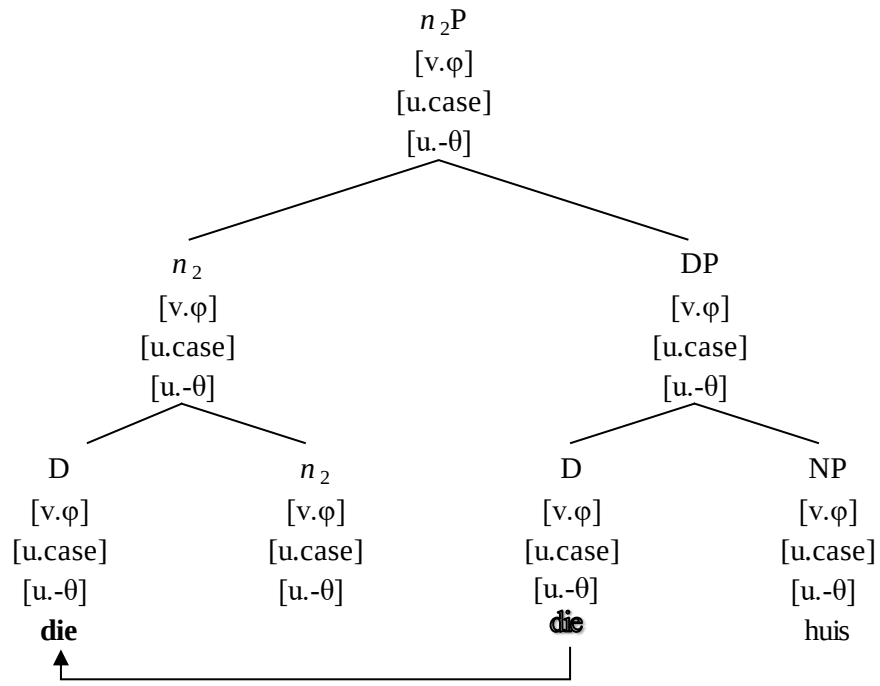
(14) .



[52] Cf. Oosthuizen (2013:38-39) and the references cited there for a discussion of head raising operations.

The antecedent of the relative pronoun *wat* in (10) is the nominal expression *die huis* ("the house"). This expression is also contained in a nominal shell, one that is headed by another light noun, n_2.[53] The derivation of the expression *die huis* involves three operations: (i) the N(P) *huis* is merged with the determiner *die* ("the") resulting in the DP *die huis*; (ii) this DP is then merged as the complement of the light noun n_2 giving rise to the n_2P; and (iii) the D is head-raised to the n_2.[54] The light noun n_2 has unvalued φ-, θ- and case features, as does the D *die*. The N *huis* also has unvalued case and θ-features, but its φ-features are valued (third person, singular number, neuter gender). The three operations mentioned above are illustrated in (15) (Meyer, 2015:60).

(15)



Merger of the D and the N(P) in (15) results in a probe-goal configuration in which the N's φ-features value those of the D.[55] Merger of the n_2 and the DP similarly results in the φ-features

[53] The light noun n_2 does not serve to express any focus-related property, hence it does not carry a contrastive-focus feature, in contrast to n_1. The exact nature of n_2 remains as a topic for further investigation.

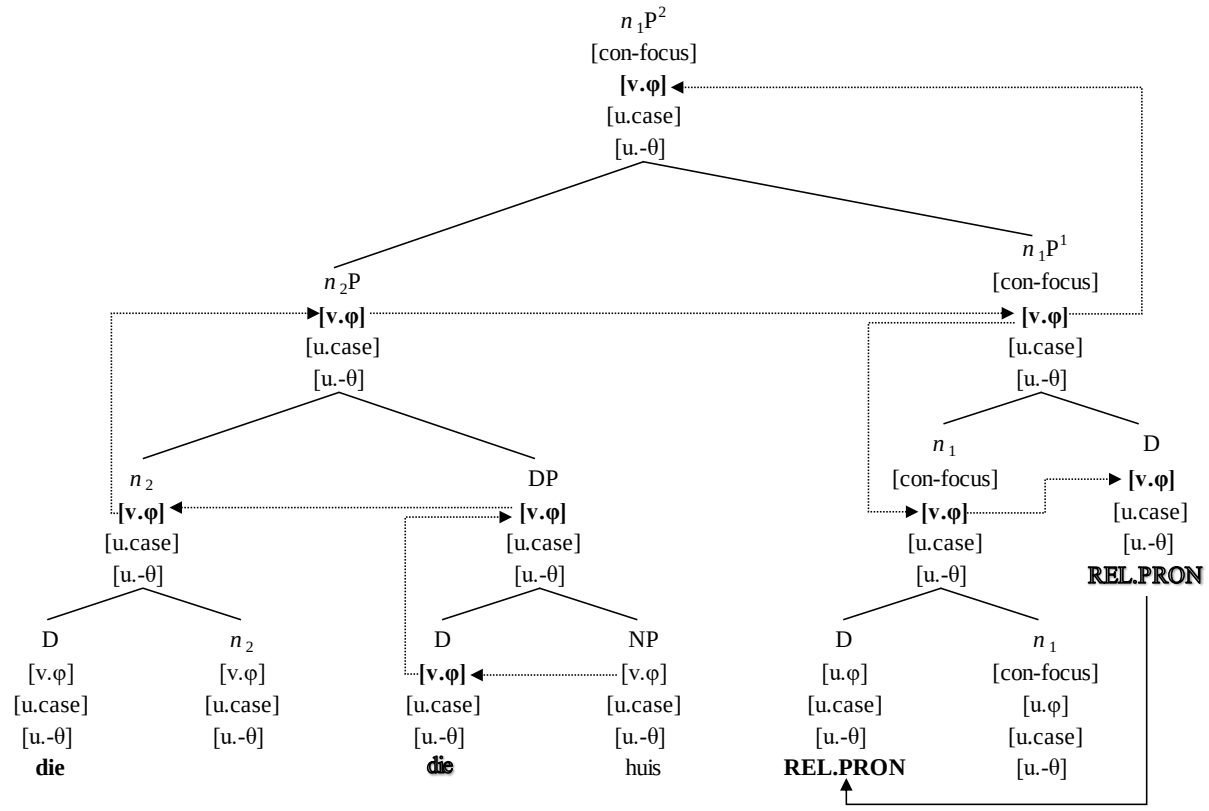
[54] For discussion of the internal structure of the *n*P occurring in the specifier position of a light noun, cf. Meyer (2015:60-63) and Oosthuizen (2013:43-45).

[55] According to Radford (2009:475), "when a head is merged with its complement, it serves as a probe which searches for a matching goal within its complement (i.e. an expression which it can agree with)". For further discussion of the notions 'probe' and 'goal', cf. e.g. Chomsky (2000; 2001) and Hornstein et al. (2005:317-318). It is assumed here that phrasal constituents can also serve as probes; in this regard, cf. Oosthuizen (2013:section 3.2) and the references cited there.

of the N valueing those of the n_2, with the D serving as intermediary; these φ-values percolate to the maximal projection n_2P.

The n_2P in (15) is next merged into the specifier position of the contrastive-focus n_1 in (14). In this configuration, the φ-features of the n_2P (i.e. [3 pers, sing, neut], as derivationally supplied by the N *huis*), serve to value the φ-features of the n_1 and its projections, as shown in (16) (Meyer, 2015:61). In other words, the nominal expression *die huis* indirectly φ-values the relative pronoun *wat*, with the contrastive focus light noun n_1 acting as intermediary. (Here and below, feature-valuation is indicated by means of dotted arrows and raising operations by means of solid arrows; features that have been valued in the course of the derivation are given in bold.)

(16)



Based on Oosthuizen's (2013:44-45) hypothesis about the interpretation of obligatory reflexive pronouns, Meyer (2015**:**61-62) proposes that (16) represents the necessary and sufficient configuration for establishing a coreferential relationship between the relative pronoun and the nominal expression n_2P, with "the semantic device that is responsible for providing the coreferential (or anaphoric) interpretation" of a relative pronoun taking the following form:

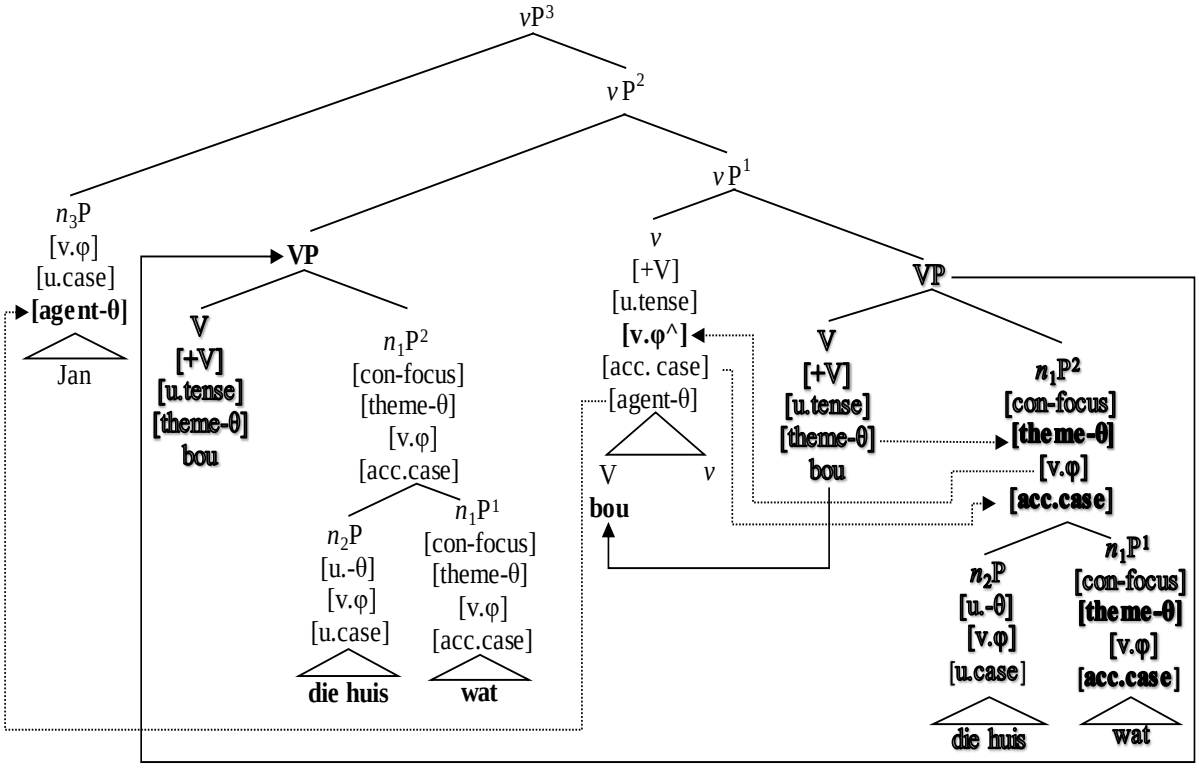
(17) The φ-valued D in the configuration in [(16)] is semantically interpreted as a relative pronoun anaphor and the n_2P as its antecedent; that is, the D is interpreted as obligatorily coreferential with the n_2P.

It is important to note, however, that the semantic device in question is "unaware" of the fact that the relative pronoun acquired its φ-values derivationally, that is, from the n_2P, with the [con-focus] n_1 acting as intermediary.

Having established the coreferential relationship between the relative pronoun *wat* and its antecedent *die huis* in (10), the derivation of the relative clause *wat Jan bou* ("that Jan is building") can be briefly described as follows. Firstly, the n_1P^2 in (16) is selected as the complement of the V *bou*. The θ-feature of this V serves to value the θ-feature of the n_1P^2 (and, by implication, also those of the n_1P^1 and the n_1) as theme. Note that the θ-feature of the n_2P *die huis* ("the house") in the specifier position of the n_1P^2 in (16) remains unvalued at this point since, according to Meyer (2015:62), "it does not form part of the n_1's 'projection spine'". The VP that is formed through the merger of the V and the n_1P^2 is next merged with a light verb with the categorial feature [+V], an accusative case feature [acc.case], a valued θ-feature [agent.θ], and an unvalued tense feature [u.tense]. The *v* also carries a set of unvalued φ-features [u.φ] that is appended with a movement diacritic ^.[56] Merger of the *v* and the VP gives rise to several operations. First, V-to-*v* Raising takes place, resulting in the V being merged with the light verb. Second, the case feature of the *v* provides the accusative value to the n_1P^2. Third, the n_1P^2 values the φ-features of the light verb. Because of the movement diacritic linked to the *v*'s φ-features, φ-valuation triggers raising of the n_1P^2 into the specifier position of the light verb, [spec, *v*]. This is a pied-piping operation: not just the n_1P^2 but the whole VP containing it is raised into [spec, *v*]. The next step is to merge the subject of the relative clause – i.e. the nominal expression *Jan* in (10) – into the second specifier position of the light verb. In this configuration, the light verb assigns the agent θ-value to the expression *Jan*. The resulting structure may be represented as follows (Meyer, 2015:62-63):[57]

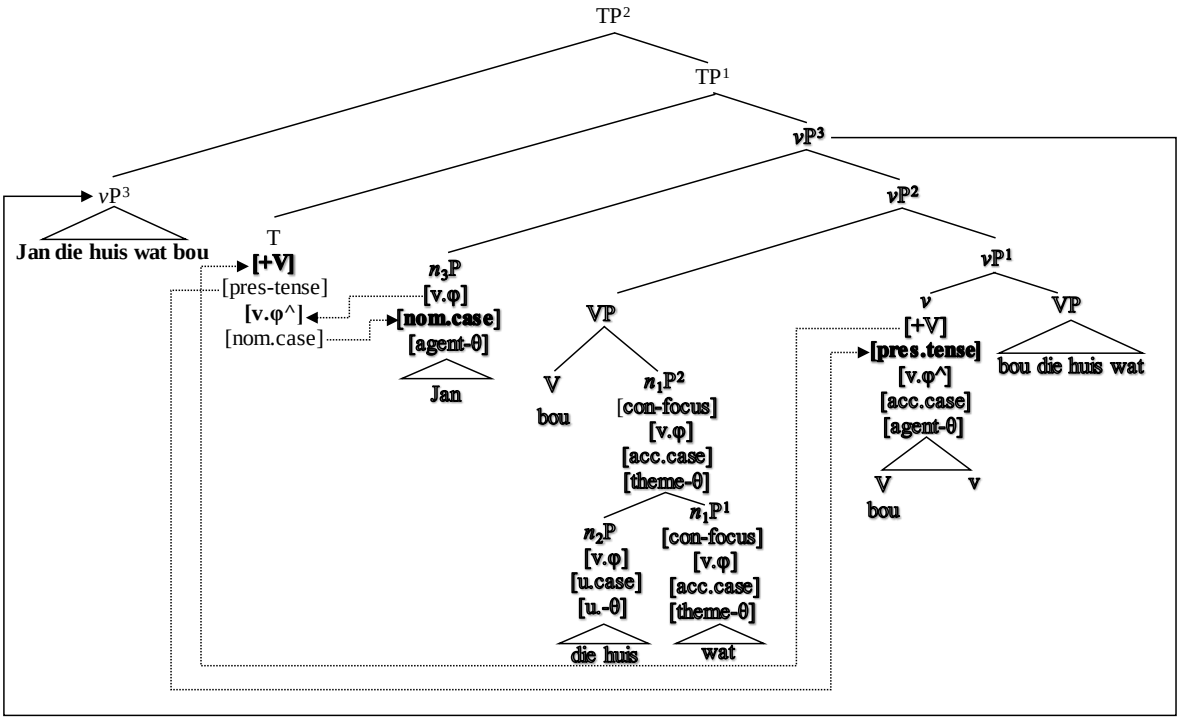
[56] Cf. Oosthuizen (2013:53-54) and the references cited there for a discussion of movement diacritics.
[57] Note that the expression *Jan* also represents a light noun phrase. In (18) the head of this *n*P is n_3, which is distinct from the light nouns associated with *die huis* and *wat* (Meyer, 2015:62-63).

(18)



The vP^3 in (18) is subsequently merged with the functional category T, containing an unvalued categorial feature, a tense feature with the value present [pres.tense], a nominative case feature [nom.case], and a set of unvalued φ-features that is appended with a movement diacritic [u. φ]^. Merger of the vP^3 and the T gives rise to the following operations. First, the tense feature of the V/*v* is assigned the present tense value by the T-head, which is in turn supplied with a [+V] categorial value by the V/*v*. Second, the n_3P values the T's φ-features as [3pers, sing, masc]. A consequence of φ-valuation is that the n_3P undergoes raising, triggered by the movement diacritic carried by the T's φ-features. Being a pied-piping operation, the entire vP^3 containing the n_3P is moved into the specifier position of the T. The resulting structure may be represented as in (19) (Meyer 2015:64).

(19)

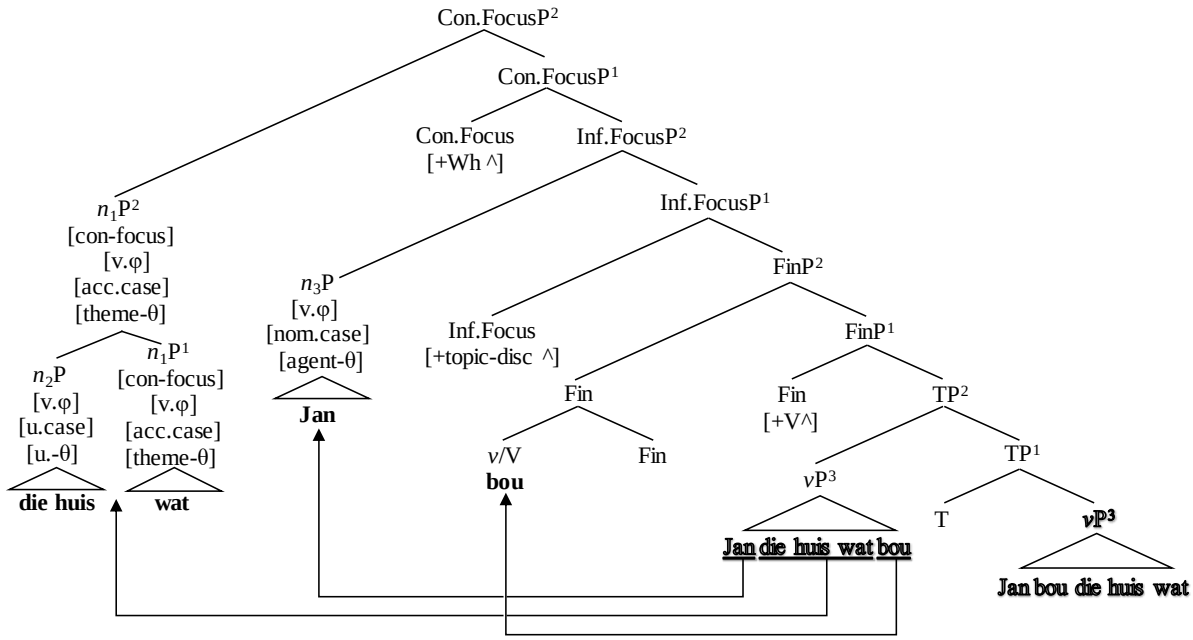


The next stage in the derivation of the relative clause in (10) involves merging the TP^2 in (19) with a functional head associated with the complementiser (C) domain. In this regard, Meyer (2015:65) puts forward an analysis that is based on Benincà and Poletto's (2004) proposals about the internal structure of the C-domain.[58] On Meyer's analysis, the C-domain contains three distinct functional head categories that enter into the derivation of relative clauses, namely a Finiteness head (Fin), a structurally higher Informative Focus head (Inf.Focus) and a still higher Contrastive Focus head (Con.Focus). Meyer (2015:66) states that "the Fin-head contains a V-related feature carrying a movement diacritic (with likely candidates being a categorial feature or a tense feature)". This feature triggers raising of the V/*v bou* ("build") in the vP^3 occupying the [spec, T] position to the C. The next step concerns raising of the subject nP^3 *Jan* contained in the vP^3. According to Meyer (2015:66) "the Inf.Focus-head contains a discourse-related topic feature with a movement diacritic that triggers raising of the subject n_3P *Jan* into [spec, Inf.Focus] position". The third step concerns raising of the expression *die huis wat* ("the house that"), that is, the n_2P^2 contained in the vP^3 in (19), into the leftmost position in the C-domain of the relative clause. Meyer (2015:66) describes this operation as follows: "the Con.Focus-head contains a feature (perhaps in the form of a Wh-feature) that triggers

[58] This analysis is in turn based on the Split-CP hypothesis initially proposed by Rizzi (1997). A brief description of Rizzi's hypothesis and the proposals subsequently put forward by Benincà and Poletto's (2004) was given in section 4.3 above; cf. also Radford (2009:324-334). For an application of Rizzi's and Benincà and Poletto's proposals to the analysis of the C-domain in Afrikaans, cf. Botha and Oosthuizen (2009:32-45).

raising of the contrastive-focus n_1P^2 into the [spec, Con.Focus] position, resulting in the correct linear order *die huis wat Jan bou"*.[59] The effect of the three raising operations just outlined is illustrated by the structure in (20) (Meyer, 2015:66).

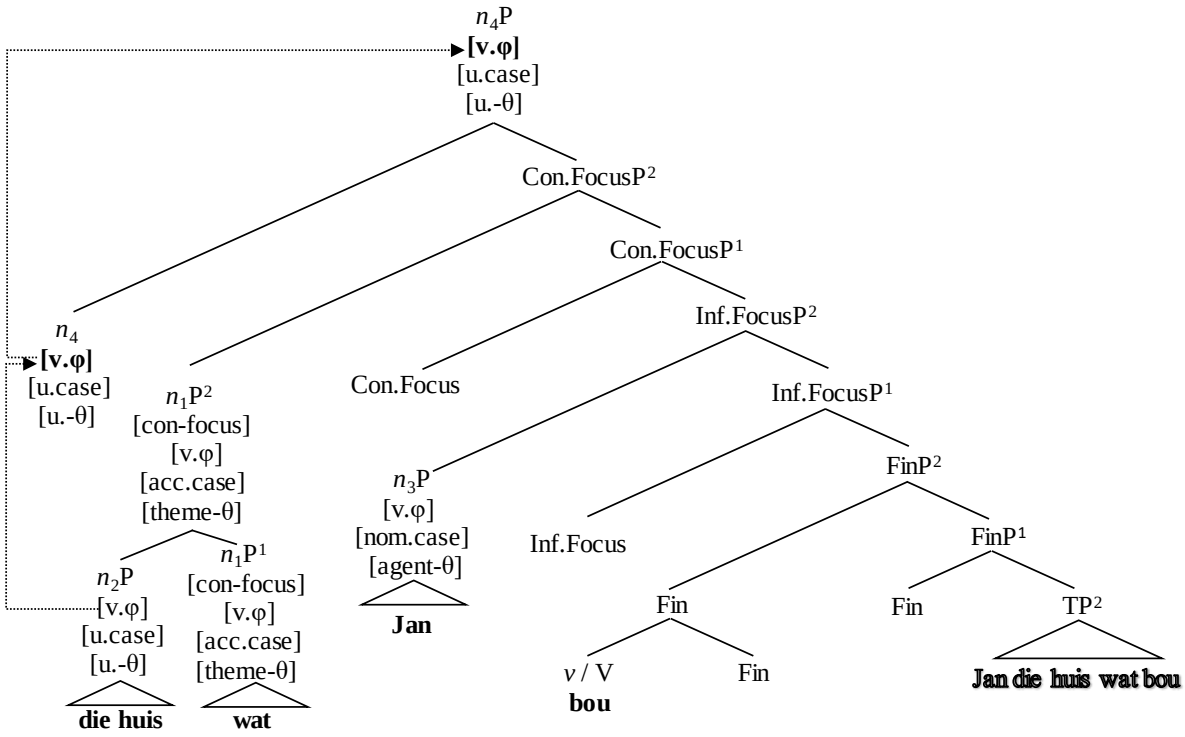
- (20)



There are two points in connection with the structure in (20) that are of importance here. Firstly, the linear order *die huis wat Jan bou* in (20) is exactly that reflected in the surface word order in the sentence in (10). Secondly, even though the Con.FocusP^2 in (20) represents a clausal construction, it functions as the direct object argument of the main clause verb *sien* ("see") in (10), that is, as a nominal expression. In this regard, Meyer (2015:67) proposes that the Con.FocusP^2 in (20) "is merged as the complement of a further light noun, n^4, projecting the nominal phrase n_4P and thus accounting for the nominal nature of the sequence *die huis wat Jan bou*." Meyer goes on to claim that the light noun in question has at least three types of unvalued features, namely a θ-feature, a case feature and a set of φ-features. Merger of the n_4 and the Con.FocusP^2 brings about a configuration in which the φ-features of the n_2P can value those of the light noun, as shown in (21) (Meyer, 2015:68). At this stage, then, the only features that are still unvalued are the case and θ-features carried by the n_4 and the n_2P.

[59] Meyer's claim that the relative pronoun *wat* (together with its antecedent *die huis*) is raised into the specifier position of the Con.Focus-head differs from the analysis put forward by Rizzi (1997). In both Rizzi's and Benincà and Poletto's (2004) analysis of the C-domain, the projection headed by the functional category Force represents the highest category in the left-periphery of a clause. According to Rizzi (1997:289), "relative operators occupy the highest specifier position, the spec of Force".

- (21)



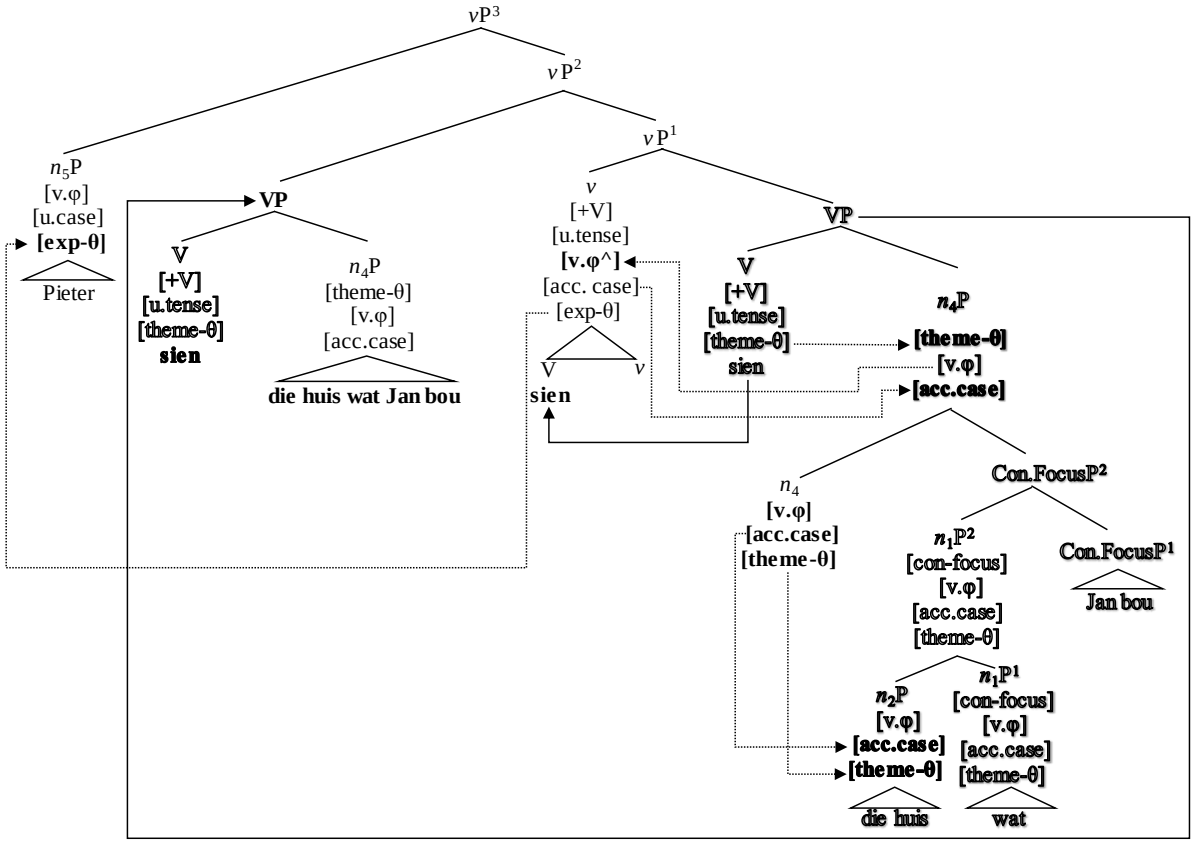
The next step in deriving the sentence in (10) involves merging the n_4P in (21) with the V *sien* ("see"), The V carries a theme θ-feature which values the corresponding feature of the n_4P and, by implication, the n_4-head. In this configuration, the n_4-head can provide the same θ-value to the n_2P *die huis*, that is, the nominal expression in the specifier position of the n_1P^2 in [spec, Con.Focus]. This means that the n_4P and the n_1P^2 are both left with only one more feature to be valued, namely the case feature.

The VP that is derived through merger of the n_4P in (21) with the V *sien* is subsequently merged with an experiencer light verb, giving rise to V-to-*v* raising. On Meyer's (2015:68) analysis, the light verb contains (i) three valued features, namely [exp.θ], [acc.case] and the categorial feature, and (ii) two unvalued features, namely [u.tense] and [u.φ]^, with the latter carrying a movement diacritic. The following operations can now take place. Firstly, the *v*'s case feature values the corresponding feature of the n_4P as accusative; as a consequence, the n_4-head provides the same value to the n_2P *die huis*. Secondly, the φ-features of the light verb are valued by the n_4P (3pers, sing, neut); because of the movement diacritic carried by the *v*'s φ-features, the n_4P is raised into the specifier position of the *v*, with pied-piping resulting in the entire VP containing the n_4P being merged in [spec, *v*]. The outcome of the feature valuation operations

just described is that the n_4P and the n_2P do not contain any more unvalued features, and can therefore not enter into any further valuation operations.

The next external merger operation involved in the derivation of the sentence in (10) concerns the subject *Pieter*, which is merged into the second specifier position of the experiencer light verb. Like all nominal expressions, *Pieter* is also analysed as an *n*P, in this case a nominal expression that is headed by the light noun n_5, distinct from the other four light nouns occurring in (21). According to Meyer (2015:69), the n_5P *Pieter* contains "at least, unvalued case- and θ-features as well as a set of valued φ-features (third person, singular, masculine)." In the resulting structure, the θ-feature of the n_5P *Pieter* receives the experiencer value from the light verb. The various merger and feature valuation operations described above are shown in the structure in (22) (Meyer, 2015:69).

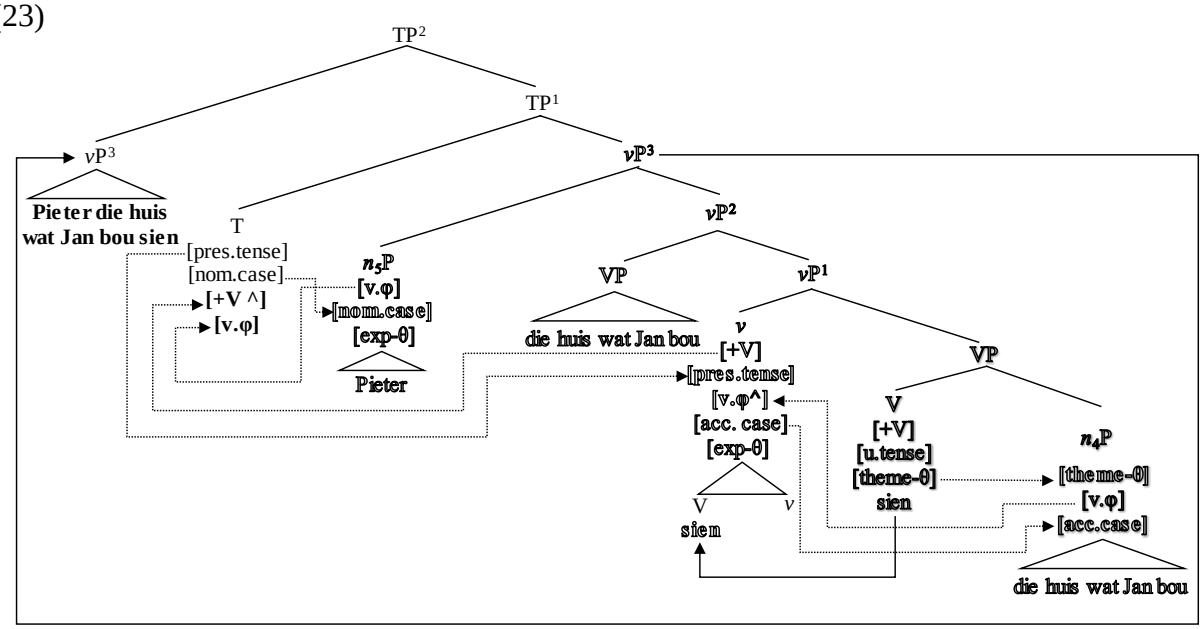
(22)



The vP^3 in (22) is now merged as the complement of a T-head that has two valued features, namely [pres.tense] and [nom.case], as well as an unvalued categorial feature and a set of unvalued φ-features, with the latter carrying a movement diacritic. In this configuration the T serves to value the tense feature of the V/*v* as present, and the V/*v* in turn provides the [+V]

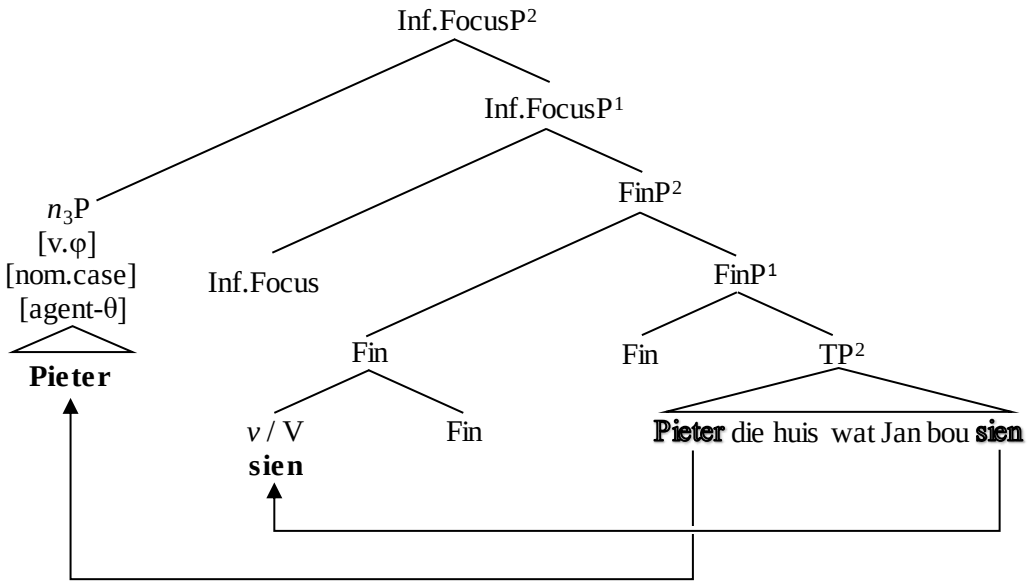
value to the categorial feature of the T. The T furthermore values the case feature of the n_5P in (22) as nominative, and this *n*P concurrently values the φ-features of the T. The movement diacritic associated with the T's φ-features brings about raising of the n_5P; this is a pied-piping operation which results in the whole *v*P^3 being raised into the specifier position of the T, as indicated in (23) (Meyer, 2015:70).

(23)



Meyer (2015:70-71) describes two further operations that have to take place in order to get from the linear order *Pieter die huis wat Jan bou sien* in (23) to the eventual surface order *Pieter sien die huis wat Jan bou* in (10). The first operation involves raising the finite verb, more precisely the V/*v sien*, to the Fin-head, that is, to the lowest head within Rizzi's (1997) and Benincà and Poletto's (2004) C-domain. Secondly, the subject n_5P *Pieter* is raised into the specifier position of the Inf.Focus-head. The final derived structure would then be along the lines of (24), with the subject *Pieter* occupying the initial position and the finite verb *sien* the second position of the main clause, in accordance with the linear word order reflected in (10) (Meyer, 2015:71).

(24)



This concludes the discussion of the underlying assumptions and core devices of the proposed Nominal Shell analysis of restrictive relative clauses in Afrikaans as proposed by Meyer (2015). The next section examines whether these assumptions and devices can also provide an adequate framework for the analysis of restrictive relative clauses in TL-Arabic.

5.3 An NSA approach to restrictive relative clauses in TL-Arabic

5.3.1 Introduction

Chapter 2 provided a description of the various types of relative clause in TL-Arabic. The present section attempts to develop an analysis of one of these types, namely restrictive relative clauses, within the nominal shell framework put forward by Meyer (2015) for the analysis of restrictive relative clauses in Afrikaans. The focus will be on two main questions. Firstly, does the nominal shell approach provide an adequate framework for the description of the structural properties of restrictive relative clauses in TL-Arabic, in other words, can it account for the empirical facts presented in Chapter 2? Secondly, can the obligatory coreferential relationship between the relative pronoun, *elly* in the case of TL-Arabic, and its antecedent be adequately accounted for within this framework? A summary of the main findings of the investigation is presented in section 5.4.

5.3.2 An analysis of restrictive relative clauses in TL-Arabic

As was pointed out in section 3.3, TL-Arabic contains a single morphophonological form functioning as a relative pronoun (RP), namely *elly*; depending on the grammatical context, this item corresponds to any of the English relative pronouns "who", "which", "whose", "when", etc. Consider for example the sentence in (25) in which the RP *elly* corresponds to the English RP "who". In this case the relative clause forms part of the direct object of the matrix clause, with *elly* interpreted as obligatorily coreferential with the expression *ar-rajl* ("the man"). The RP in turn functions as the subject of the relative clause.

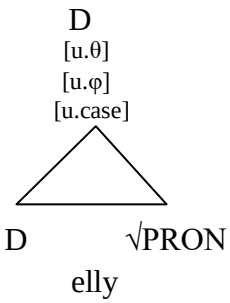
(25) ane$_j$ {n$_j$-ʕrf-(h$_i$)} ar-rajl$_i$
I SM.1pers.fem/masc.sing-pres+know+(OM.3pers.masc.sing) the-man
[elly$_i$ {y$_i$- ǵne}].
rel-prn SM.2pers.masc.sing-pres+sing
"I know the man who is singing"

Note that, in addition to the coreferential relationship between the RP *elly* and the expression *ar-rajl*, the sentence in (25) contains several instances of agreement relationships. These relationships, which are taken here and in the rest of the discussion to represent essentially a subtype of coreferentiality, obtain (i), between *elly* and the SM *y-* forming part of the verbal complex of the relative clause, (ii) between the direct object of the main clause, *ar-rajl*,[60] and the OM *-h* forming part of the verbal complex of the main clause; and (iii) between the subject of the main clause, *ane* ("I"), and the SM *n-* prefixed to the verb of the main clause. The fact that *elly* stands in a coreferential relationship with the SM *y-* and the expression *ar-rajl*, and the latter in turn is coreferentially related to the OM *-h*, implies that these four elements are all (directly or indirectly) coreferentially related, as shown by the various instances of the subscript *i* in (25). Although not central to the present study, the question of whether the coreferential relationships obtaining between these elements, and between the subjects and the respective SMs in (25), can also be accounted for within the nominal shell approach will be addressed in the course of the discussion below. Note that the OM in (25) is optional; this phenomenon will also be discussed below (see also section 3.3).

[60] This is a simplification: the direct object of the main clause actually comprises the nominal expression *ar-rajl* together with the relative clause, with the latter representing the complement of the N *rjl* ("man").

In terms of the analysis of restrictive relative clauses put forward by Meyer (2015), the RP *elly* and its antecedent *ar-rajl* ("the man") in (25) are initially merged into the same nominal shell construction. Following Meyer (2015:59), this construction is claimed to be headed by a contrastive-focus light noun, that is, an *n* with the feature [con-focus]. It is furthermore claimed that the coreferential relationship between the RP and its antecedent is established by means of φ-feature valuation, where the antecedent values the φ-features of the RP with the light noun serving as intermediary. Against the background of these hypotheses, let us now consider in more detail how the sentence in (25) would be derived. To start, it is assumed that the RP *elly* is formed through merger of a category-neutral lexical root √PRON and a D-constituent, as shown in (26). The resulting extended D has at least three types of unvalued features: a theta (θ)-feature, a case feature and a set of φ-features.[61]

(26)



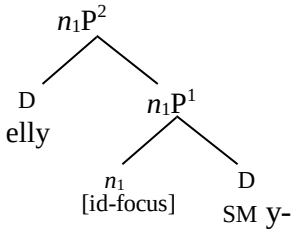
As pointed out in section 2.1, the subject in TL-Arabic always co-occurs with a SM that forms part of the verbal complex. According to the analysis of SMs in TL-Arabic put forward by Elghariani (2016:48), "the SM and the subject expression are … merged into a nominal shell headed by an identity-focus light noun, with the SM representing the complement and the subject expression the specifier of the *n*".[62] Adopting this analysis, the initial structure containing the SM *y-* and the RP *elly* with which it is associated in (25) would therefore be along the lines of (27). Like the RP, the identity-focus light noun also contains unvalued θ-, φ-

[61] The corresponding analysis of relative pronouns in Afrikaans was discussed in section 5.2; cf. also Oosthuizen (2013:34) and Msaka (2014:67) for a similar analysis of reflexive pronouns in Afrikaans and Chichewa, respectively.

[62] Cf. Msaka (2014:77) for a similar analysis of SMs (and also OMs) in Chichewa.

and case features.[63] Although not indicated in (27), the SM is assumed to undergo D-to-n_1 raising (see (28) below).[64]

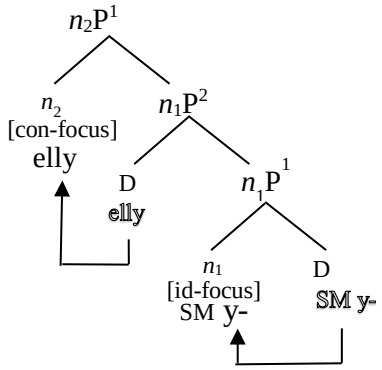
(27)



According to Elghariani's (2016:48-52) analysis of SMs in TL-Arabic, and Msaka's (2014) analysis of SMs and OMs in Chichewa, the coreferential relationship between such a marker and its antecedent is established via φ-feature valuation: the antecedent supplies the relevant values to the SM/OM with the identity-focus light noun serving as intermediary. In the case of (27), however, no such feature valuation can take place since, at this point, both the RP and the SM carry a set of unvalued φ-features.

In terms of Meyer's (2015) analysis, the coreferential relationship between an RP and its antecedent is mediated by a contrastive-focus light noun that takes the RP as its complement and the antecedent as its specifier. On this analysis, then, the n_1P^2 in (27) is merged with a [con-focus] light noun, n_2, which also carries unvalued θ-, φ- and case features. In this configuration the RP *elly* in (27) is raised to the contrastive-focus light noun n_2. The resulting structure may be represented as in (28).

(28)

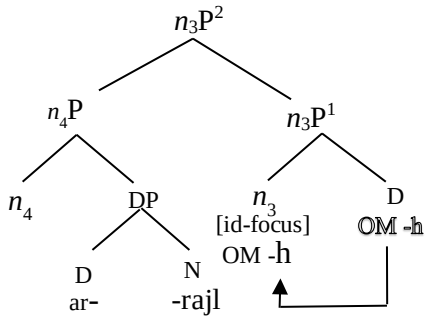


[63] For ease of presentation, the features carried by the various nominal expressions and their projections are not indicated in the structures in (27)-(29). We return below to the feature make-up of these elements and the issue of feature valuation.

[64] CF. section 5.2 for a similar raising operation proposed for Afrikaans by Meyer (2015). It should be noted that such a D-to-*n* operation is not employed in Elghariani's (2016:48-52) analysis of SMs in TL-Arabic.

Let us next consider the expression representing the antecedent of the RP *elly* in (25), namely *ar-rajl* ("the man"). This antecedent expression is associated with the OM *-h* that forms part of the verbal complex of the main clause. Similar to the analysis of SMs put forward above, it is assumed that the OM also enters the derivation as the complement of an identity-focus light noun (which may be referred to as n_3 to distinguish it from the two light nouns in (28)).[65] The antecedent of this OM, that is, the nominal expression *ar-rajl*, is merged into the specifier position of the n_3, as shown in (29). The OM, the light noun n_3, the D *ar-* ("the") and the noun *-rajl* ("man") all contain unvalued case and θ-features; however, in contrast to the OM and the D, the noun carries a set of valued φ-features, namely [3pers, sing, masc].

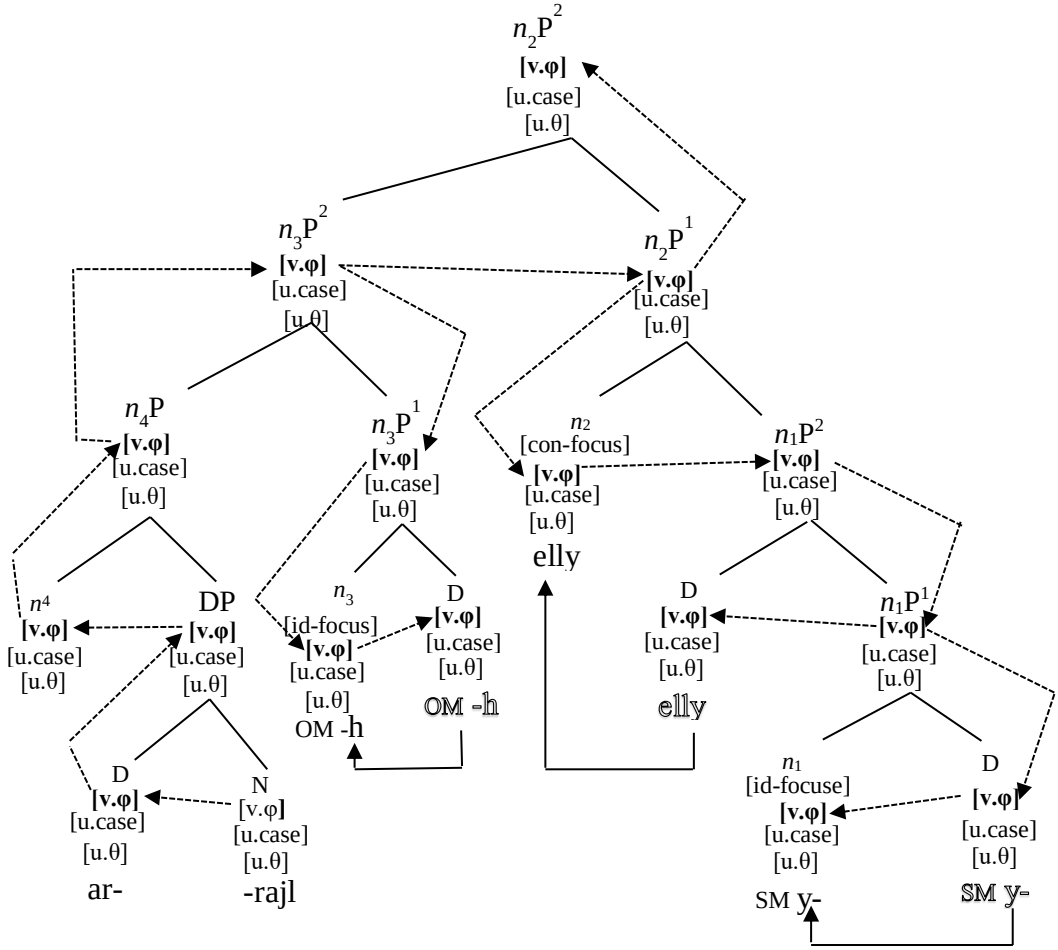
(29)



In terms of Meyer's (2015) analysis of restrictive relative clauses, the antecedent of the RP *elly*, that is, the n_3P^2 *ar-rajl* in (29), is merged into the specifier position of the n^2 in (28). This gives rise to the structure in (30). In this structure, the N *-rajl* ("man") is initially the only element with a set of valued φ-features, namely [3pers, sing, masc] (indicated as [v.φ]). As shown in (30), these features serve to value the φ-features of all the other nominal elements and their projections. (Here and below, feature-valuation is indicated by means of dotted arrows, and features that have been valued in the course of the derivation are given in bold.)

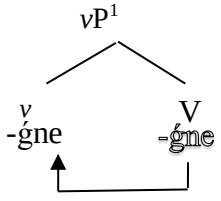
[65] As in the case of SMs (see above), it is assumed that the OM undergoes D-to-*n* raising.

(30)



Note that the verb (or more accurately, the verb stem *-ǵne* ("sing")) of the relative clause in (25) is intransitive, that is, it does not select a direct object argument (or any other complement). The verb stem is taken to carry, at least, a valued categorial feature [+V] and an unvalued tense feature [u.tense]. Following Elghariani (2016:51) it is furthermore assumed "that the verb stem is associated with particular grammatical slots to be filled by the relevant verbal affixes, such as the SM, T/A, etc." Being intransitive, the verb stem *-ǵne* is associated with a SM slot but not an OM slot.[66] This verbal element is merged with a light verb carrying at least an [agent.θ] feature, giving rise to the following structure with the V being raised to the light verb:

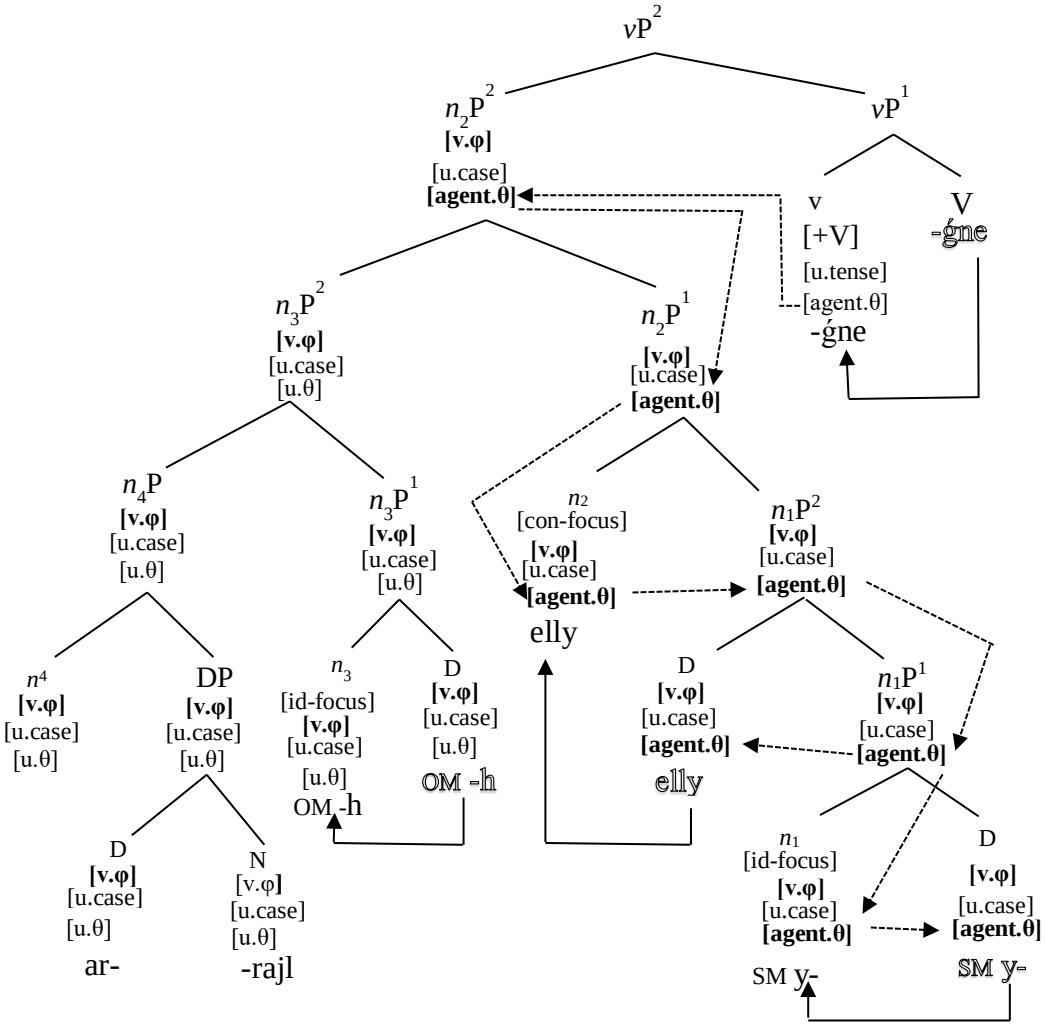
(31)



[66] It was mentioned in section 2.1 that the SM in TL-Arabic also serves to express present tense, *y-* in the case of a masculine and *t-* in the case of a feminine subject. An account of this phenomenon is beyond the scope of the present study and is left as a topic for future investigation.

The next step in the derivation of the relative clause in (25) involves merging the n_2P^2 in (30) into the specifier position of the light verb in (31). As illustrated in the structure in (32), this results in the θ-feature of the n_2 and of all the other elements on its projection spine being valued as agent by the light verb. In contrast, the θ-feature of the n_3P^2 *arrajl* ("the man") in the specifier position of the n_2P^2 remains unvalued because it is not part of the projection spine of the n_2.

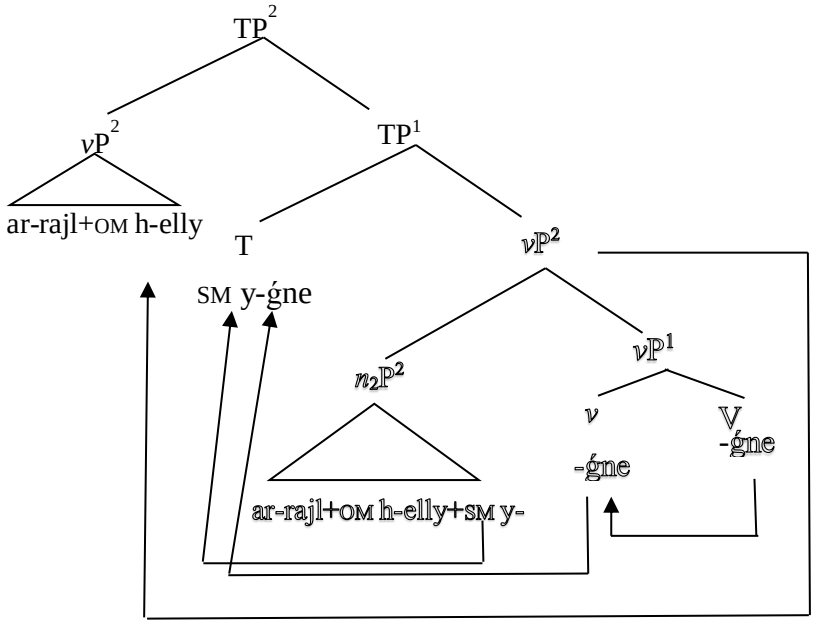
(32)



The vP^2 in (32) is subsequently merged with a T-head containing a valued tense feature [pres.tense], an unvalued categorial feature, a set of unvalued φ-features carrying a movement diacritic [u.φ]^, and a case feature with the nominative value [nom.case]. This results in a configuration in which several operations can take place. To start, the T's categorial feature is valued as [+V] by the V/*v* and the T supplies the present tense value to the V/*v*. Next, following Elghariani (2016:52-53), two raising operations involving the V/*v* are applied: (i) the V/*v* is

raised to the T,[67] and (ii) the SM *y-* contained in the n_1P in (32) is raised into the relevant grammatical slot in the verbal complex, resulting in the form *yǵne* . The case feature of the n_2, that is, the RP *elly*, furthermore receives the nominative value from the T; this value percolates to all the n_2-projections and is also assigned to the n_1 (and its projections) containing the SM *y-*. Finally, the n_2P^2 serves to value the φ-features of the T. Since the T's φ-features are associated with a movement trigger ^, the whole n_2P^2 is raised to the specifier position of the T. The effects of the various raising operations just outlined are shown in the simplified structure in (33).

(33)

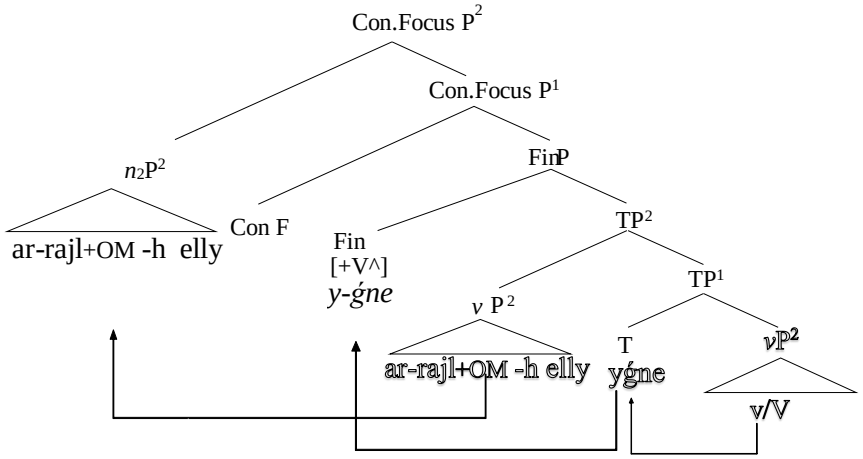


The next stage in the derivation of the relative clause in (25) involves merging the TP^2 in (33) with a functional head associated with the complementiser domain. Following Meyer's (2015:65-66) analysis of relative clauses in Afrikaans, the C-domain in TL-Arabic is taken to contain at least two distinct functional head categories that enter into the derivation of relative clauses, namely a Finiteness head (Fin) and a structurally higher Contrastive Focus head (Con.Focus).[68] Meyer (2015:66) states that "the Fin-head contains a V-related feature carrying a movement diacritic (with likely candidates being a categorial feature or a tense feature)". Adopting these ideas for TL-Arabic, the feature in question triggers raising of the V/*v yǵne* ("is

[67] Cf. also Msaka (2014:77-87)) for a similar analysis involving V/*v*-to-T raising in Chichewa. It should be noted that neither Meyer (2015) nor Oosthuizen (2013) makes provision for a V/*v*-to-T raising operation in Afrikaans.
[68] Meyer (2015) also provides for an Information Focus (Info.Focus) head in the C-domain of Afrikaans relative clauses in those cases where the RP is a non-subject element; this Info.Focus head represents the position to which the (non-RP) subject is raised. In the TL-Arabic example in (25), the RP *elly* represents the subject argument of the main verb in the relative clause; as argued below, the *n*P headed by the RP is raised into [spec, Con.Focus].

singing") in (33) from T to Fin. This is followed by raising of the n_2P^2 contained in the vP^2 in [spec, T] into the specifier position of the Con.Focus-head.[69] Meyer (2015:66) describes this operation as follows: "the Con.Focus-head contains a feature (perhaps in the form of a Wh-feature) that triggers raising of the contrastive-focus [n_2P^2 –SA] into the [spec, Con.Focus] position" The effect of the two raising operations just described are shown in (34).

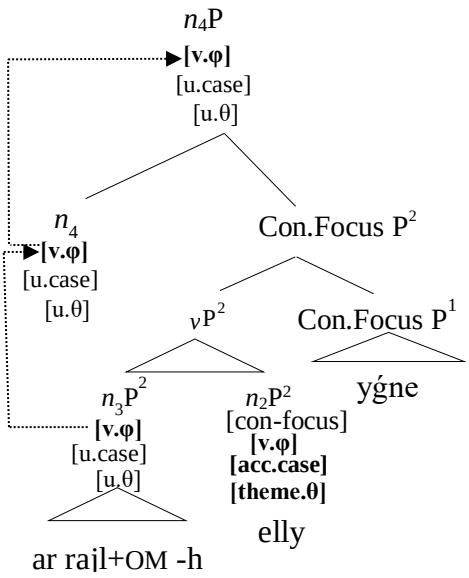
(34)



Note that the sequence *arrajl elly yǵne* in (34) reflects the surface word order in the sentence in (25). Furthermore, although the Con.FocusP^2 in (34) represents a clausal construction, it nevertheless functions as the direct object argument of the main clause verb -*ʕrf*- ("know") in (25), that is, as a nominal expression. To account for this fact, Meyer (2015:67) proposes that the Con.FocusP in Afrikaans relative clauses "is merged as the complement of a further light noun." Assuming this analysis for TL-Arabic as well, the Con.FocusP^2 in (34) is merged to a distinct light noun, n^4, projecting the nominal phrase n_4P; this would then account for the nominal nature of the sequence *arrajl elly yǵne*. Meyer goes on to claim that the light noun in question has at least three types of unvalued features, namely [u.θ], [u.case] and [u.φ]. Merger of the n_4 and the Con.FocusP^2 brings about a configuration in which the φ-features of the n_2P can value those of the light noun n_4, as shown in (35) (Meyer, 2015:68). Note that the only unvalued features at this point are the case and θ-features of the n_4 and the n_3P^2.

[69] At this stage, the vP^2 in (33) contains no other constituents besides the n_2P^2; hence it could also be argued that it is the whole vP^2 that is raised to [spec, Con.F].

(35)

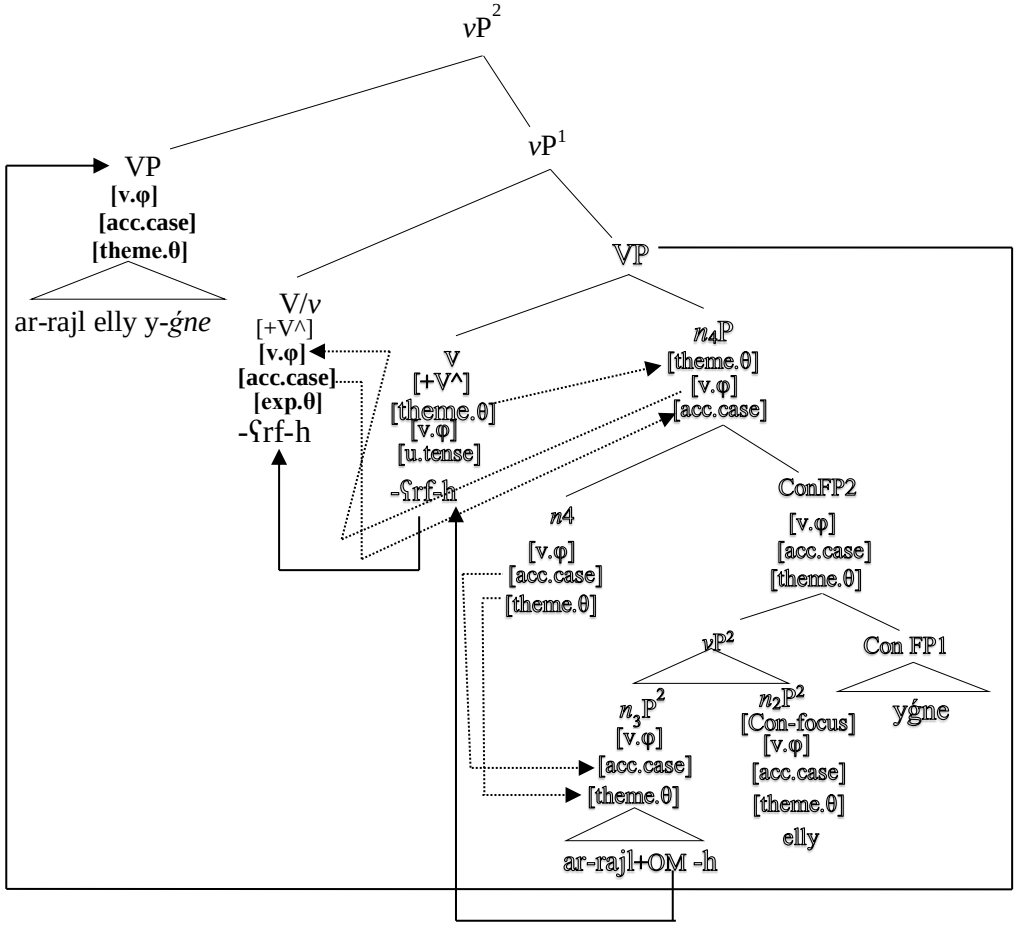


The next step in deriving the sentence in (25) involves merging the n_4P in (35) with the V *-ʕrf-* ("know"). This V carries a valued θ-feature, [theme.θ], which values the corresponding feature of the n_4P and, by implication, the n_4-head. In this configuration, the n_4-head can provide the same θ-value to the n_3P^2 *arrajl*, that is, the nominal expression in the specifier position of the n_2P^2 in [spec, Con.Focus]. Both the n_4P and the n_2P^2 are therefore left with only one unvalued feature, namely the case feature. Note that *-ʕrf-* ("know") is a transitive verb, which means that the verb stem is associated with both a SM and an OM slot. A consequence of merging the n_4P in (35) with the main clause verb stem is therefore that the OM *-h* contained in the n_3P^2 in (35) is raised into the relevant grammatical slot in the verbal complex, resulting in the form *-ʕrfh*.

The VP resulting from the merger of the n_4P in (35) with the V *-ʕrf-* is next merged with an experiencer light verb, giving rise to V-to-*v* Raising. On Meyer's (2015:68) analysis, the light verb contains the valued features [exp.θ], [acc.case] and [+V], and the unvalued features [u.tense] and [u.φ^]. In this configuration, the *v*'s case feature values the corresponding feature of the n_4P as accusative, and the n_4-head provides the same value to the n_3P^2 *arrajl*. The φ-features of the light verb are furthermore valued by the n_4P as [3pers, sing, neut], and because of the movement diacritic associated with the *v*'s φ-features the n_4P is raised into the specifier position of the *v*; being a pied-piping operation, this results in the entire VP containing the n_4P being merged into the [spec, *v*] position. The effects of the movement and feature valuations just described are illustrated in (36). Note that there are no more unvalued features associated

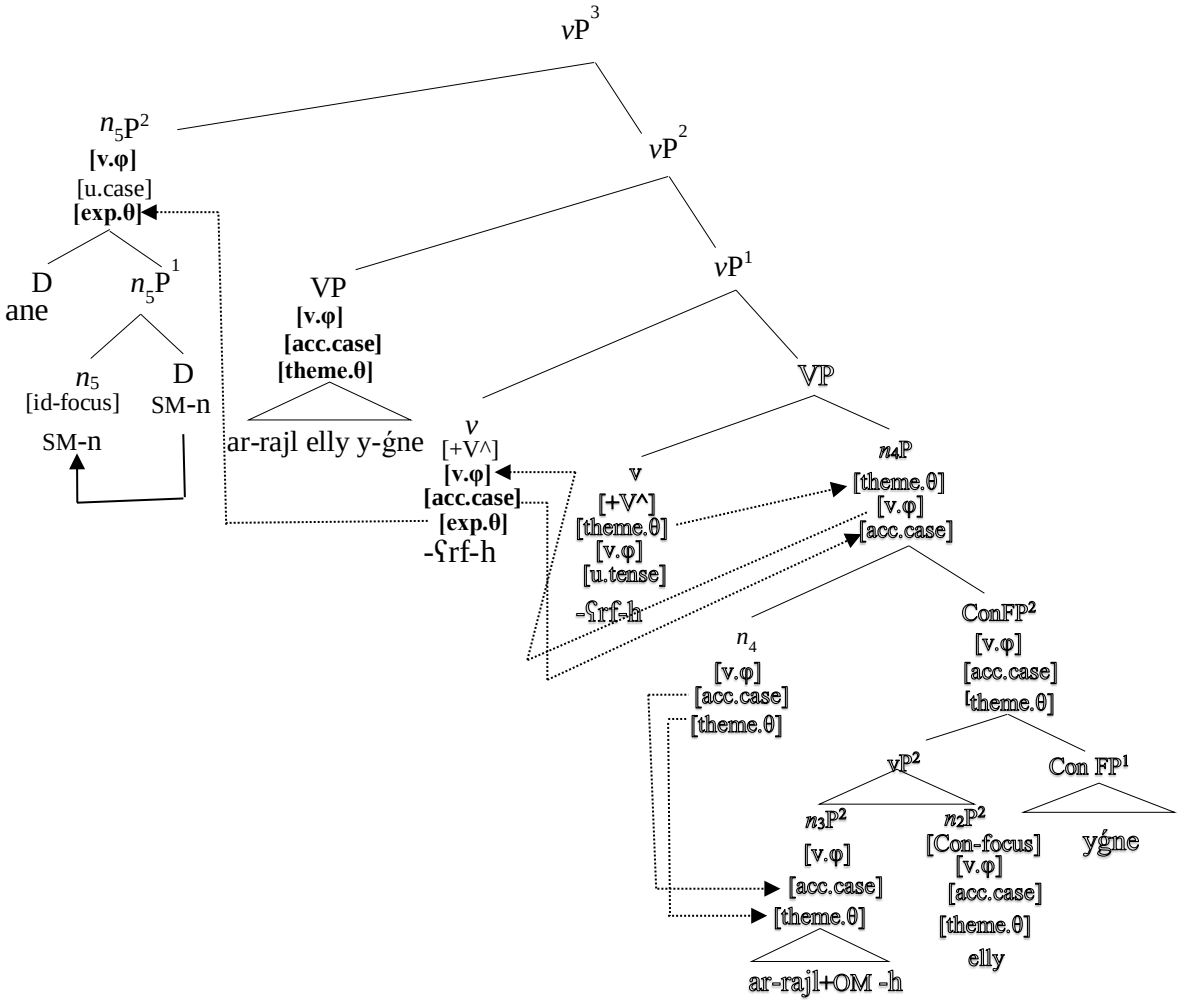
with the n_4P and the n_2P at this point, hence they cannot enter into any further valuation operations.

(36)



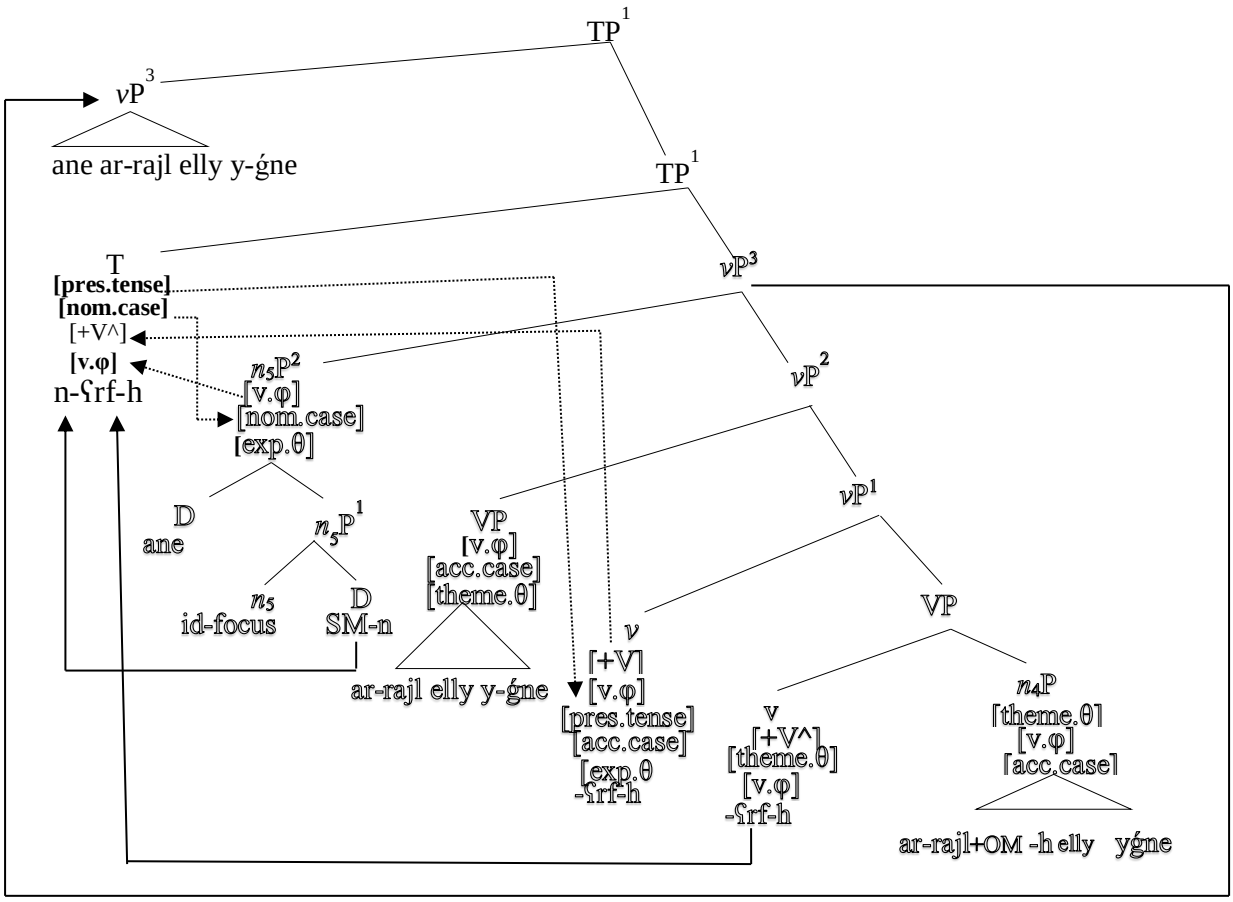
The next operation involved in the derivation of the sentence in (25) concerns the subject *ane* ("I") which is associated with the SM *n*-. As argued above (cf. the structure in (27)), the coreferential relationship between these two elements is established via φ-feature valuation within a nominal shell structure headed by an identity-focus light noun, n_5 in the case at hand. In this structure, the SM represents the complement of the light noun and the subject expression *ane* ("I") its specifier; the latter supplies the relevant φ-values (1pers, sing) to the SM with the identity-focus light noun serving as intermediary. In line with Meyer's (2015:69) analysis, the n_5P^2 *ane* is assumed to also contain, at least, the features [u.case] and [u.θ]. The resulting n_5P^2 is merged into the second specifier position of the experiencer light verb. In the *v*P structure resulting from this merger operation, the θ-feature of the n_5P^2 *ane* is assigned the experiencer value from the light verb. The various merger and feature valuation operations described above are shown in the structure in (37).

(37)



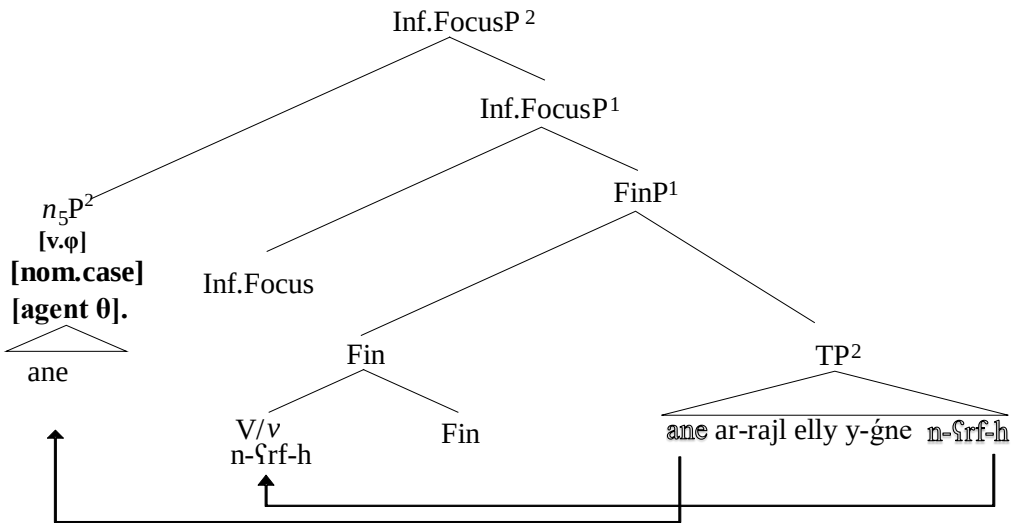
The *v*P^3 in (37) is subsequently merged as the complement of a T-head that has two valued features, namely [pres.tense] and [nom.case], as well as an unvalued categorial feature and a set of unvalued φ-features that carries a movement diacritic. This gives rise to the following operations. Firstly, the T assigns the present tense value to the tense feature of the V/*v*, and the V/*v* provides the [+V] value to the categorial feature of the T. Secondly, in line with the analysis proposed above in connection with the verbal complex of the relative clause, the V/*v* *-ʕrfh* is raised to the T and the SM *n-* contained in the n_5P^2 in (37) is subsequently raised into the relevant grammatical slot in the verbal complex, resulting in the form *nʕrfh*. Thirdly, the T values the case feature of the n_5P^2 in (37) as nominative, and this *n*P in turn provides the relevant φ-values to the T. The movement diacritic associated with the T's φ-features triggers raising of the n_5P^2; a pied-piping operation that brings about raising of the entire *v*P^3 into the specifier position of the T. The various operations just described are indicated in (38).

(38)



Two further operations have to take place in order to get from the linear order *ane arrajl elly ýgne n-ʕrf-h* in (38) to the eventual surface *ane nʕrfh arrajl elly ýgne* in (25). Adopting the ideas put forward by Meyer (2015:70-71) for Afrikaans, the first operation involves raising the finite verb, more precisely the V/*v nʕrfh*, to the Fin-head, that is, to the lowest head in the C-domain. The second operation involves raising the subject n_5P^2 *ane* into the specifier position of the Inf.Focus-head. The final derived structure may be represented in simplified form as in (39). In accordance with the linear word order reflected in (25), the subject *ane* occupies the initial position of the main clause and the finite verb *nʕrfh* the second position.

(39)



5.4 Summary

This chapter was structured around two main topics. Firstly, in section 5.2 a description was given of the nominal shell analysis of restrictive relative clauses in Afrikaans put forward by Meyer (2015). Secondly, section 5.3 addressed the question whether the general assumptions and mechanisms employed by Meyer (2015) can provide an adequate framework for the analysis of restrictive relative clauses in TL-Arabic. In broad terms, it was argued that the RP *elly* and its antecedent are initially merged into the same nominal shell construction, one headed by a contrastive-focus light noun. In this structure, the light noun takes the RP as its complement and the antecedent expression as its specifier. In this configuration, the obligatory coreferential relationship between the RP and its antecedent is established via φ-feature valuation: the antecedent expression values the φ-features of the RP, with the light noun serving as intermediary. It is important to note that the establishment of coreferentiality between the RP and its antecedent is brought about by means of a semantic device. As Meyer (2015:62) remarks, this device "does not 'know' that the φ-features of the relative pronoun were (indirectly, via the [con-focus] light noun) valued by its antecedent in the course of deriving the nominal shell structure headed by this light noun."[70] In other words, all that is required for the coreferential relationship to be established, is for the RP and its antecedent to occur in the configuration outlined above (cf. the structure in (30)). Furthermore, following Elghariani (2016:50), it was claimed that essentially the same type of analysis, but with the nominal shell headed by an identity-focus light noun, can also account for the obligatory coreferential relationship obtaining between a nominal expression and the SM with which it is associated; moreover, it was argued that such an analysis can also account for the obligatory coreferential relationship between an OM and its antecedent. In short, the analysis set out in section 5.3 appears to provide an adequate account of all the various coreferential relationships between the RP, the two SMs, the OM and the two nominal expressions in sentences of the type in (25), without requiring any theoretical devices not already provided for within the nominal shell framework employed by Meyer (2015) and Elghariani (2016).

[70] Oosthuizen (2013:45) and Elghariani (2016:69) discuss a similar device that enters into the establishment of a coreferential relationship between a reflexive pronoun and its antecedent in Afrikaans and TL-Arabic, respectively.

Chapter 6

Summary and conclusion

This study dealt with the phenomenon of restrictive relative clause constructions in Tripolian Libyan Arabic (TL-Arabic). An example of such a construction is given in (1) below, with the (bracketed) relative clause introduced by the relative pronoun *elly* ("where", given in bold). This pronoun belongs to the grammatical class of anaphors, that is, elements that "cannot be used to pick out a referent solely by virtue of their own intrinsic meaning; they are referentially dependent on some other expression in the utterance" (Oosthuizen, 2013:3). In (1) the relative pronoun enters into a coreferential relationship with the direct object argument of the main clause, the expression *l-mkan* ("the place"), its antecedent. The function of the relative clause is to restrict the set of members to which the antecedent refers; for instance in (1) the relative clause serves to restrict *l-mkan* to a particular place, namely the one where she lived.

(1) ane n-ʕrf l-mkan [**elly** hya ʕyš-t feeh].
I pres-know the place where she past-live in
"I know the place where she lived"

The study had two main objectives. Firstly, the empirical objective was to give a description of the facts of relative pronouns and relative clause constructions in TL-Arabic, which has not previously been attempted in the literature on this variety of Arabic. The second main objective was to provide an analysis of restrictive relative clause constructions in TL-Arabic within the broad theoretical framework of generative grammar. More specifically, it was examined whether the Nominal Shell Analysis (NSA) of restrictive relative clauses in Afrikaans put forward by Meyer (2015) can provide an adequate framework for analysing the relevant facts of TL-Arabic.

In addition to the introductory chapter, the study was organised as follows. In Chapter 2 brief background information was provided of some aspects of TL-Arabic grammar, with specific focus on the morphosyntactic properties of the verbal complex. Chapter 3 focused on relative pronouns and relative clause constructions. In section 3.2 a brief description, illustrated with examples from English, was given of three types of relative clause that have been identified in the literature. These three types are restrictive relative clauses (the topic of this study), non-restrictive relative clauses (also known as appositive relative clauses), and free relative clauses.

In section 3.3 we turned our attention to relative pronouns and relative clauses in TL-Arabic. The discussion addressed the following general questions:

(i) Which relative pronouns are found in TL-Arabic, and what are their morphophonological properties?

(ii) Do the three types of relative clause discussed in section 3.2 – i.e. restrictive relative clauses, non-restrictive relative clauses, and free relative clauses – also occur in TL-Arabic?

(iii) What are the structural positions in which a relative pronoun can occur in TL-Arabic relative clauses, and in which grammatical functions can it be used (e.g. subject, direct object, etc.)?

(iv) In which grammatical functions can the expression serving as the antecedent of the relative pronoun be used?

As regards question (i), it was illustrated in sections 3.3.1-3.3.2, respectively, that the three types of relative clause under discussion all occur in TL-Arabic. As regards question (ii), it was found that TL-Arabic has only one morphophonological form functioning as a relative pronoun, namely *elly*. Depending on the grammatical context, this pronoun corresponds to a range of relative pronouns in English, such as “who”, “which”, “whose”, “where”, when”, “why”, etc. The relative pronoun is compulsory, except in constructions where the expression serving as its antecedent is indefinite, in which case it can be omitted in colloquial speech. As regards question (iii), it was illustrated that the relative pronoun *elly* can function as the subject, direct object and prepositional object of the relative clause. This implies that, although it always surfaces in the leftmost position of the relative clause, the relative pronoun initially enters the derivation in the structural positions normally associated with subject, direct object and prepositional object arguments. It was furthermore shown that *elly* can occur in possessive constructions and that it can also be used to express adverbial functions such as time, place and reason. Finally, as regards question (iv), it was shown that the antecedent can function as the subject, the direct object and a prepositional object in the matrix clause.

As further background for the analysis of the TL-Arabic data in Chapter 5, Chapter 4 provided an outline of the conventional approach within the broad generative framework to the analysis of restrictive relative clauses. The discussion was organised around two main issues. The first concerned the formal mechanisms that are involved in deriving constructions (such as

restrictive relative clauses) where a *wh*-phrase surfaces in the left-periphery of a clause. In this regard, section 4.2 discussed the role of *Wh*-Movement, a core mechanism of the generative model of grammar known as Government and Binding (GB) theory. The discussion was illustrated with examples from English. The effect of *Wh*-Movement is that a *wh*-phrase – that is, a phrase containing a relative pronoun or a question word such as *who, what, where,* etc. – is raised into the leftmost position of a clause. Section 4.2.1 examined the application of *Wh*-Movement in the derivation of non-echo *wh*-questions. In the course of the discussion attention was also given to some of the constraints on *Wh*-Movement, such as Subjacency and the Multiply Filled Comp Filter. As regards the derivation of restrictive relative clauses, it was shown in section 4.2.2 that *Wh*-Movement is applied in exactly the same manner as in the case of non-echo *wh*-questions.

The second main issue addressed in Chapter 4 concerned the position to which a *wh*-phrase is moved in the derivation of relative clauses and also non-echo *wh*-questions. According to the conventional generative analysis of such constructions, the left-periphery of a clause comprises a CP, with the preposed *wh*-phrase occupying its specifier position. However, several empirical and theoretical objections have been raised in the literature against such an analysis. Rizzi (1997) accordingly proposed an alternative approach where the CP is split into a number of functionally distinct head categories, namely Force, Topic, Focus and Finiteness, with the FinP occurring in the lowest position and the ForceP in the highest position in the C-domain; the Force head is claimed to be the location of complementisers (such as *that* and *if* in English). This proposal, known as the Split-CP hypothesis, was discussed in section 4.3. In the course of the discussion attention was also given to several revisions put forward by Benincà and Poletto (2004), specifically regarding the analysis of the topic and focus projections within this extended C-domain. In terms of the Split-CP hypothesis, a non-echo *wh*-question is derived by raising the *wh*-phrase containing the question word into the specifier position of the FocP;[71] in contrast, the *wh*-phrase containing the relative pronoun is raised to the specifier position of the ForceP.

The information provided in Chapters 2-4 formed the empirical and theoretical background for the analysis of the TL-Arabic data in Chapter 5. As pointed out in Chapter 4, the coreferential

[71] As discussed in section 4.3, Benincà and Poletto (2004:57) claim that "FocP is not a single XP but a 'field' " comprising at least three distinct heads, namely an Informative Focus head and two Contrastive Focus heads, with the Inf.FocP occurring immediately above the two Contr.FocPs. On their analysis, the specifier of the Inf.FocP represents the landing site for raised *wh*-phrases in non-echo *wh*-questions.

relationship between a relative pronoun and its antecedent received hardly any attention in the generative literature. This issue is however central to the analysis of restrictive relative clause constructions in Afrikaans that was put forward by Meyer (2015) as an alternative to the conventional generative approach to such constructions described in Chapter 4. The core hypotheses of Meyer's analysis, which is based largely on the ideas underlying Oosthuizen's (2013) Nominal Shell Analysis (NSA) of obligatory reflexivity, were set out in section 5.2. Following this, an attempt was made in section 5.3 to develop an analysis of restrictive relative clause constructions in TL-Arabic within the framework of Meyer's (2015) NSA account of such constructions in Afrikaans. As regards the establishment of coreferentiality, the proposed TL-Arabic analysis incorporates the following four (simplified) claims:

(i) The relative pronoun *elly* and its antecedent are initially merged into the same nominal shell construction, one headed by a contrastive-focus light noun.

(ii) The light noun takes the relative pronoun as its complement and the antecedent expression as its specifier.

(iii) The antecedent expression values the φ-features (person, number, gender) of the relative pronoun, with the light noun serving as intermediary.

(iv) The antecedent expression and the φ-valued relative pronoun are interpreted as obligatory coreferential.

The coreferential interpretation in (iv) is brought about by a semantic device. All that is required for such an interpretation to be established is for the two constituents to share the same φ-values and to occur in the configuration described in (ii). It is important to note that the semantic interpretation device is "unaware" of the fact that the light noun was φ-valued by the antecedent. As described in section 5.3, various operations are subsequently applied to raise the relative pronoun and its antecedent into their respective surface positions. In terms of the proposed analysis, and in line with the analysis proposed for Afrikaans by Meyer (2015), the relative pronoun ends up in the specifier position of the Con.FocusP in the left-periphery of the relative clause.[72] This is in contrast to Rizzi's (1997:325) claim that "relative pronouns are in the Spec of Force".

In the course of the discussion in section 5.3 attention was also given to two further instances of obligatory coreferentiality in TL-Arabic. These concern the agreement relationship between

[72] Cf. note 71 above.

(i) a subject marker (SM) and the subject argument of a sentence and (ii) an object marker (OM) and the direct object argument, where the SM and the OM are both affixes forming part of the verbal complex (cf. Chapter 2). Following Elghariani (2016), it was argued that both these instances of agreement can be accounted for in terms of essentially the same nominal shell analysis as proposed for relative pronouns and their antecedents. In the case of SMs and OMs, however, the nominal shell is claimed to be headed by an identity-focus light noun.

To conclude, the analysis proposed in section 5.3 appears to provide an adequate account of the derivation of restrictive relative clause constructions in TL-Arabic, without requiring any theoretical devices not already available within the NSA framework employed by Meyer (2015). In particular, and in contrast to the conventional generative approach to restrictive relative clauses, the proposed analysis seems able to account for the obligatory coreferential relationship between the relative pronoun and its antecedent, as well as between, respectively, SMs and OMs and the expressions with which they are associated.

The analysis set out in Chapter 5 was limited to restrictive relative clauses in TL-Arabic. It was shown in Chapter 3 that TL-Arabic also contains non-restrictive and free relative clauses. The question therefore arises whether such an analysis can be employed as a framework to account for the facts of these other two types of relative clause as well. It was moreover illustrated in section 3.3.2 that a restrictive and a non-restrictive relative clause can co-occur in the same containing nominal expression, with the two relative pronouns taking the same antecedent. Whether this phenomenon can be accounted for in terms of the NSA analysis proposed in Chapter 5 clearly requires further investigation. The proposed analysis was furthermore developed with reference to a specific kind of restrictive relative clause, namely one where (i) the relative pronoun functions as the subject argument of the relative clause and (ii) the relative clause forms part of the direct object argument of the matrix clause. However, as discussed in Chapter 3, the relative pronoun can be used in various other functions in a restrictive relative clause: as the direct object, a prepositional object, an adverbial of place, time, and reason, and also in possessive constructions. Similarly, the phrase containing the relative clause and its antecedent can be used as the subject of the matrix clause and as the object of a preposition. The obvious question, then, is whether the analysis put forward in Chapter 5 can also account for the facts of these other kinds of restrictive relative clause construction.

Numerous other interesting and potentially problematic issues were left unexplored in this study. For instance, as pointed out in section 3.3.1, the relative pronoun *elly* is compulsory in

restrictive relative clauses in TL-Arabic, except where its antecedent is indefinite, in which case the pronoun can be omitted in colloquial speech. It is unclear how such a "selection restriction", seemingly imposed by the antecedent, could be explained, and whether the "omitted" pronoun is perhaps still present in the form of a phonologically null element (i.e. a zero item ∅; cf. section 3.2.1). Several facts and assumptions regarding the morphosyntax of SMs and OMs in TL-Arabic also require further investigation. For example, it is unclear how to account for the fact that, in clauses with a first person plural subject, the SM occurs as a discontinuous element, namely a verbal prefix indicating first person and feminine/masculine, and a suffix indicating plural number; this phenomenon is also found with [2 pers.sing.fem] subjects, but in such cases the SM suffix serves to express gender, not number (cf. Chapter 2). Following Elghariani (2016), it was furthermore assumed in section 5.3 that an SM and OM initially enter the derivation in distinct structural positions, separate from the verb stem, and that they are subsequently raised into their respective grammatical slots in the verbal complex. It needs to be determined, however, whether this assumption has any merit, and if it does, what the exact processes are by which raising is effected. Finally, adopting Meyer's (2015) proposals for the analysis of relative clauses in Afrikaans, it was claimed in section 5.3 that the relative pronoun *elly* in TL-Arabic occurs in the specifier position of the Con.FocusP in the left-periphery of the relative clause. The merit of this claim also needs to be determined since, as noted above, this is contrary to Rizzi's (1997) assertion that relative pronouns end up in the specifier position of the ForceP.

Given the very limited scope of this study, the issues outlined above – and no doubt many others not mentioned here – remain as topics for further research.

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Appendix A: Arabic-specific letters and their phonetic transcription

The following tables, slightly adapted from Algryani (2012), give an overview of Arabic-specific letters and their phonetic transcription.

Arabic letter	Phonetic symbol	Description
ء	ʔ	glottal stop
ب	b	voiced bilabial stop
ت	t	voiceless alveolar stop
ث	θ	voiceless dental fricative
ج	ž	voiced palatal affricate
ح	ḥ	voiceless pharyngeal fricative
خ	x	voiceless uvular fricative
د	d	voiced alveolar stop
ذ	ð	voiced dental fricative
ر	r	voiced alveolar flap
ز	z	voiced alveolar fricative
س	s	voiceless alveolar fricative
ش	š	voiceless palato-alveolar fricative
ص	ṣ	emphatic s
ض	ḍ	voiced velarized alveolar stop
ط	ṭ	emphatic t
ظ	D	voiced velarized dental fricative
ع	ʕ	voiced pharyngeal fricative
غ	ǵ	voiced uvular fricative
ف	f	voiceless labiodental fricative
ق	q	velar glottalized plosive
ك	k	voiceless velar stop
ل	l	voiced alveolar lateral
م	m	voiced bilabial nasal
ن	n	voiced alveolar nasal
ه	h	voiceless glottal fricative
و	w	voiced bilabial semi vowel
ي	y	voiced palatal semi vowl

Vowels	Short	Long
Central Open	a	ā
Front Closed	i	Ī
Back Closed Rounded	u	ū

Appendix B: Morphophonological forms of the relative pronoun in Standard Arabic

The table below, based on Versteegh et al. (2011), gives a summary of the various morphophonological forms of relative pronouns in Standard Arabic. Examples illustrating the use of some of these forms are given in (1)-(3).

	SINGULAR		DUAL		PLURAL	
	MASC	FEM	MASC	FEM	MASC	FEM
NOMINATIVE ("who")	allaði	allati	allaðhani	allatani	allaðina	allati alwati allai
GENITIVE ("whose")	allaði	allati	allaðhani	allatayni	allaðina	allati alwati allai
ACCUSATIVE ("whom")	allaði	allati	allaðhani	allatayni	allaðina	allati alwati allai

(1) *RP functioning as an adverbial of place in the relative clause:*

Ana {ʔ-ʕrf (hom)} al-mkān-yn

I SM.1pers.fem/masc.sing-pres+know+(OM.3pers.masc.plu) the-places-two

[allaðhani hya {lʕb-t} fe-hom].

where she play+SM.3pers.fem.sing-past in-them

"I know the two places where she played"

(2) *RP functioning as an adverbial of time in the relative clause*

Ana {ʔ-ʔrf-(h)} al-wgt

I SM.1pers.fem/masc.sing-pres+know+(OM.3pers.masc.sing) the-time

[allaði hya {b-t-ðhb } feh].

when she fut+SM.3pers.fem+go in

"I know the time when she will go"

(3) *RP functioning as an adverbial of reason in the relative clause*

Ana {ʔ-ʔrf (ha)} al-ʔsbab

I SM.1pers.fem/masc.sing-pres+know+(OM.3pers.fem.plu) the-reasons

[allati hya {t-šʔr-ha} btʔb].

why she SM.3pers.sing.fem-pres+feel+OM.3pers.fem.plu tired

"I know the reasons why she feels tired"